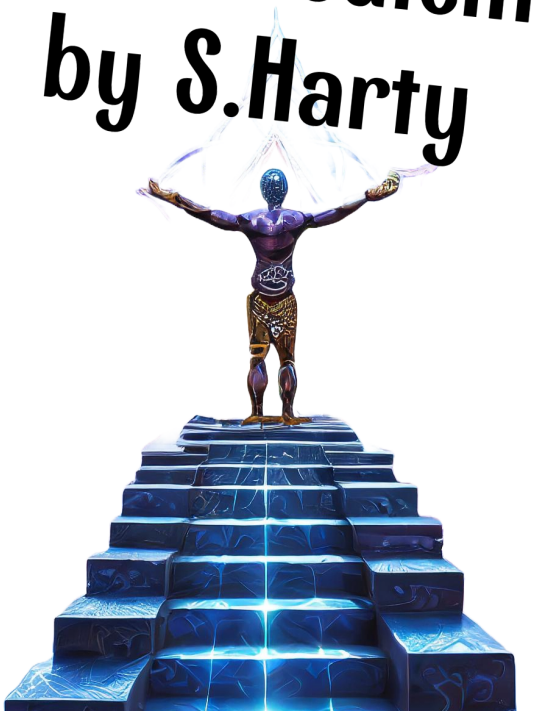
HOME ALONE 2020: Surviving Modern Pandemics using Ancient Medicines by S.Harty



I. Dedicated To…

Chinese Medical Practitioners
Altschuler, Nelson, Fisher
for restoring "chi"

Pacific Northwest and Southwest Desert tribes
for discovering Lomatium

Global African family
for loving me back
to Life

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NOTE: ***Sincere apologies to anyone whose work appears in full or is quoted here, if it is incorrect or offensive. I did reach out for permission, but seldom received a response. The content included was deemed critical for patients and caretakers.***

II. BOOK JACKET + INTRODUCTION

An archbishop from South Africa shared these words of wisdom that comfort me in times of trouble: "Only two things bring about transformation ~ great love or great suffering."

There is a mythological, David and Goliath scene in "Game of Thrones", a popular TV series, that resonates: Arya Stark, a petite girl, is forced to face and fight death in awful ways as part of a bizarre apprenticeship. Arya becomes the last warrior standing on the battlefield precisely because she knows multiple tricks to outwit death, in spite of her fears. At the very end of the series finale she runs and jumps the giant leader of the White Walkers, armed only with a small knife. Her diminutive size, and lowly status is so deceptive that The Night King, with a deadly hand around her throat, allows her to come too close...it proves to be a fatal mistake.

My healing journey, against all odds, began at the end of 2017. I fired western doctors, and set out to try acupuncture in order to heal two, reactivated viral illnesses caused by the Epstein Barr Virus (lifelong) and Atypical Polio (age 20), or die with dignity. This started with my first master acupuncturist in Seattle because he had cured an acquaintance of breast cancer using powerful Chinese herbs. Per oncologists, it is possible to take Chinese herbs along with standard western cancer treatments. He diagnosed me in one session with latent pathogens, delighted that I was a "text book case." Because I was too weak to commute to Seattle for treatments, I saw a second, Vashon Island acupuncturist where I lived, weekly. It was this skilled and petite practitioner who brought me back to life.

After six weeks of acupuncture I went from being bedridden and dying, to dancing. Then I had to re-learn basic human functions as viruses retained in the body infiltrate major organs, like long haul COVID-19. This took eighteen months of weekly acupuncture. However, it did not "kill" the viruses because I was still too weak to tolerate more powerful herbs like Xue-Fu-Zhu-Yu-Tang. My Seattle based Chinese Medical Practitioner cautioned me to keep doing what I was doing until I was 110 percent better. Previously I had been too weak to brew a cup of herbs and island retirees had run circles around me.

After six months of weekly island acupuncture I survived a short flight to a family reunion in Chicago, and reported back: "I dance like a twenty year old, have the

metabolism of a fifteen year old and the muscle tone of a nine year old." These improvements mimic stem cell patches which made me wonder if acupuncture stimulates our own stem cells which in turn, trigger rejuvenation.

Weekly acupuncture gave me enough "chi" or electricity to relocate to the dry, desert town of Cottonwood, Arizona, near Sedona. I exhaled beside the Verde Valley River surrounded by mesas and Native American tribes. This new environment controlled mycotoxins, viruses, genetic pre-diabetes and creeping "arthritis" which turned out to be arthrosis in my joints (probably viral in cause). All had been activated after global travels followed by the damp, humid Pacific Northwest.

In July 2019 I saw a third Chinese Medical Practitioner in Arizona who diagnosed me thoroughly in three hours. She told me that if I did everything she suggested, I would get well within two years. I started with Lomatium, a Native anti-viral which brought my lifelong EBV load down from off the charts (over 600), to normal (1-20) in three months and negative (zero), with anti-bodies in six months. Lomatium is how I became strong enough in 2020 to escape COVID-19 and write this book, even before vaccines.

Acupuncture addressed multiple organ damages one-by-one and weaned me off competing western medication which caused side effects worse than any virus: viruses do not benefit from killing the host. Phototherapy stem cell patches, placed on specific points or pain areas, restored energy. Ninety minutes a day of concentrated oxygen over six months, improved pre-diabetes, allergies and breathing. Mycotoxins and arthrosis abated in Arizona's dry desert sunshine. I built strength and stamina by walking, dancing or swimming, daily.

Three Chinese Medical Practitioners from Seattle, Vashon Island and Cottonwood, Arizona will attest to this remarkable recovery. I have not been able to convince western doctors, specialists, or researchers, to consider 5,000 year old Traditional Chinese Herbs and Acupuncture, or a 15,000 year old Native medicine, but I continue to share the information. Lomatium was tested and used successfully against the 1918 Spanish flu. It was laboratory tested again in 2019. Acupuncture influenced space age stem cell patches. These portable phototherapy patches were developed for use initially in America's navy.

DNA health and ancestry tests showed that I may have the same genetic vulnerability as Native Americans to viruses, diabetes, assorted allergies and food intolerances. It took six years of being homebound, and bedridden, while doing massive amounts of research and playing Russian Roulette with doctors and specialists, to find the path out of this nightmare. In the seventh year, armed with Lomatium, I faced a pandemic of epic proportions.

During COVID-19 lockdown I started to document how to survive disasters because disasters survived + time = adventures. The intention was to share the knowledge with family scattered around the world, but especially those in South Africa who seemed at highest risk. There was no vaccine on the horizon and doctors had admitted to me in private that they did not study viruses in medical school. They were also told not to prescribe anti-virals. I was lucky to have been in the desert, on a Lomatium anti-viral for six months, strong enough to visit South African family, *before* COVID-19 hit Everyone: "On January 20, 2020, the first case of Covid-19 in the US was diagnosed in Snohomish County, just north of Seattle, Washington. The case was a man in his 30s who had recently returned from Wuhan, China, where the virus first appeared in 2019. The case was announced to the public the next day."

NOTE: ***If you have Myalgic Encephalomyelitis/Chronic Fatigue Syndrome/Long Haul COVID, you are in esteemed company with two famous patients: Florence Nightingale after the Crimean War (exposed to very sick, global soldiers) and Charles Darwin after the Galapagos (exposed to exotic species and zoonosis). Fellow South African and comedian, Trevor Noah, addressed epidemics in Africa during his comedy show: "I wish you would." Having survived and learned from generations of viral experiences, Africans did far better than most people during the 2020 pandemic by observing the simpler precautions perfectly. The first five years are critical for accurate diagnosis and treatment (possibly because the virus replicates everywhere during that time). Consider trying: Traditional Chinese Herbs or Lomatium to kill pathogens; Xylitol nasal spray to prevent them; Acupuncture or portable stem cell patches for energy. Build a skilled support team based on well researched western and/or eastern options. Always remember the medical caveat: First Do No Harm and consult your physician as I am not a doctor.***

III. PRECURSOR TO PANDEMIC 2020: My Complicated Medical Mess
Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (EBV + Atypical Polio)

After three years of studying Anthropology and teaching in South Africa and the Middle East, I returned to America in January 2014, and settled on Vashon Island in the Pacific Northwest. My dream was to work for the Bill and Melinda Gates Foundation in Seattle so that I could live and work between Seattle and South Africa, my new and old homes.

Instead, to my disbelief, both physical and mental energy was dramatically cut in half each and every year from 2014-2018. This was accompanied by increasing body aches and pains, initially in my hands and feet https://www.researchgate.net/publication/363196395. Early symptoms that preceded these started in 2011-2013: increasing fatigue and brain fog in Africa and the Middle East; the inability to climb stairs or dance in Greece; apparent food poisoning in Turkey.

The first, incorrect diagnosis was rheumatoid or psoriatic arthritis and then fibromyalgia. Little did I know it would take 1.5 years of researching every symptom to get a full diagnosis of ME/cfs. A simple blood test diagnosed off the charts Epstein Barr Virus (EBV also known as glandular fever, mononucleosis, the kissing disease, yuppie flu). With no ME/cfs doctor or specialist and extended family abroad, I was on my own. When I asked whether or not I was contagious or infectious, I was told to keep the re-activated EBV diagnosis "under my hat" and that EBV is ubiquitous.

Over the course of four years of western medicine I declined from Moderate ME/cfs to Very Severe ME/cfs. On May 26, 2017 I was at death's door. I had spent six months trying naturopathic medicine while researching anti-virals. When finally approved to take Valtrex all of 2016, viral loads never dropped and eight Valtrex daily made me ill.

My body eventually rejected medications along with vital food and water. Struggling to breathe, and swallow, I was told that I was abusing sleep aids. No doctor would make a house call 5 minutes away. I could hardly leave bed, let alone my condominium, so I updated my will, including funeral instructions. After e-mails to family and close friends, I unlocked the front door, waiting in bed so that we could say our goodbyes.

Thanks to the intervention of a few friends and family, I did pull through and limited future medications to three. With little or no fight left I saw a Social Security Disability psychiatrist, increased or changed medications, saw more specialists, attended weekly doctor appointments, and most fatal of all: exercised. The physical pain during exercise is a warning to stop patients from over-exerting. Sudden cardiac arrest is the first cause of ME/cfs death, suicide is second. Mystery cancers are third.

Utterly exhausted in January 2018 I stumbled across research by Canadian Dr. Hyde and *British microbiologist Dr. Dowsett. Apparently Atypical Polio causing ME/cfs is often mis-diagnosed as merely mumps. So I also had Atypical Polio which impacts above the brain stem versus below the brain stem damage with Paralytic Polio. I caught these "mumps" in 1977 at age 20 in South Africa while at Cape Town University. The transmission of viruses in schools and on campuses seems to be a common theme with ME/cfs patients. It results in fluctuating grades, sudden drop outs, becoming bedridden.

Two movies were released in 2017 that highlighted the difference between two common types of ME/cfs: Unrest and Breathe. These revelations caused me to crash badly in Winter 2018. During earlier ME/cfs days a crash was twenty hours of coma-like sleep, for a week. Now a crash was projectile vomiting, liquid diarrhea, virtual paralysis for a week. Knowing that no doctor would do a home visit, that a helicopter ride, ferry ambulance or hospital visit might kill me, I managed alone. This involved waiting to see if I could survive my body turning into cement once more. I organized everything in case I did not.

I also started weekly acupuncture based on the recommendations of my Seattle based, Chinese Medicine Practitioner. He had extensive experience with latent viral pathogens in Tibet and Mexico. Acupuncture, Chinese herbs and medicinal cannabis bought me time during which I regained some strength. On the small, rural island of Vashon, twenty minutes from Seattle by ferry, I could not get oxygen approved for the summer months. Life required round the clock dark, quiet, cold to counteract inflammation, breathe, rest. I used ice packs and fans on either side of the bed blowing on my damp pajamas (also useful during global warming). Family suggested a simpler solution: an air conditioner set at 62F day and night.

First on my "to do list" was getting Social Security Disability Insurance (SSDI) which I had paid into for three decades. I had already tried four times. Without

disability or terminal status I was denied property tax exemptions, in-home care, hospice or death with dignity, not to mention basic living expenses. The global patient priority was to prevent ME/cfs patients, especially children, from being hospitalized or institutionalized, often as mental patients or malingerers.

There are few in the ME/CFS community who have not heard of the 2011 PACE Trial. This £5 million clinical trial was designed to test the effectiveness of cognitive behavioral therapy (CBT) and graded exercise therapy (GET) as treatments for people with "chronic fatigue syndrome" (CFS). A 2023 campaign forced NICE to remove graded exercise therapy (GET) from its ME guidelines. Former MP Carol Monaghan stated that ME, and the treatment of patients with it, was potentially the 'biggest medical scandal of the 21st century'. Inquest 2024 on Death of Maeve Boothby O'Neill: https://virology.ws/2024/08/15/trial-by-error-a-deeper-dive-into-the-inquests-findings-and-conclusions/?utm_source=substack&utm_medium=email

Twenty million people were diagnosed globally before long haul Covid. Twenty two million people were impacted in America alone after long haul Covid (April 2024). Dr. Keown, a British emergency room doctor, acupuncturist and author confirmed, from his perspective as a Chinese Medicine Practitioner, that ME is caused by viral/pathogen overloads. He also said Western medicine is best for emergencies only.

Bill Gates turned out to be the latest in a long line of men who thought that he had eliminated polio. However, by vaccinating the world against only three polio enteroviruses when there are literally a hundred, mutating, we may have spread it. Canadian researcher Dr. Hyde estimates 25+ percent of ME/cfs is caused by Atypical Polio. Another 25+ percent is caused by the Epstein Barr Virus, per American researcher Dr. Lerner. The first (100 variant virus) has a vaccine and the latter (60 variant virus) does not have a vaccine, but it makes no difference: viruses must be eliminated from the body including Covid-19 (multiple variants, vaccines and boosters). To Gates' credit, he does say that we will see unprecedented viral epidemics in our lifetimes. Question: is our donated blood supply and/or organs being tested for viruses?

Visionary shamans are often wounded healers: **Canadian Dr. Byron M. Hyde and ***American Dr. Martin Lerner, both had direct personal experience with Atypical Polio and Epstein Barr Viruses respectively, which is why they researched them. Dr. Lerner recorded that even after the Epstein Barr Virus left a patient's heart, the heart remained scarred. Reactivated viruses can and do impact multiple organs. Dr.

Lerner's research is in storage until 2024. These doctors helped me understand my viruses and later COVID-19 during the 2020 pandemic. The last question I posed for myself before seeking weekly acupuncture, was: "<u>What helped me or fellow ME/cfs patients?</u>

NOTE: ***If you survive, but your health never returns to normal, take this short, helpful book to all your doctor and/or legal disability appointments:"Doctor with M.E.: My Journey with Chronic Fatigue Syndrome" by UK Dr. Hng. She became one of many ME/cfs Facebook friends because she is also a patient. P.S. <u>*UK Microbiologist Dr. Dowsett's diagnosis for my "mumps"</u>: "Sub Acute Thyroiditis is a virus-induced infection of the thyroid gland caused by enteroviruses, adenoviruses, or mumps virus. It is a common trigger of the onset of ME, but, because it causes pain in the thyroid gland, jaw, ears, head and neck, it is often misdiagnosed as mumps" (2002).***

FOUR WESTERN RESEARCH DOCTORS
i. A ROSE BY ANY OTHER NAME
*by British Dr. Elizabeth Dowsett 2004

ME has already been called the 'Disease of a Thousand Names', yet, in the Spring of 2001, one of the ME Charities has just applied to the Charities Commission for another change. This time, it is from Myalgic Encephalomyelitis to Myalgic Encephalopathy, that is: from muscle pain accompanied by inflammation of the brain and spinal cord to muscle pain and damage to the brain and spinal cord of unknown origin. This clumsy euphemism will not only bloom less sweetly than it's predecessors but does not fit the facts. For example, in reply to questionnaire sent to the most severely affected patients with ME in the UK, 2/3 ascribed their present condition to a virus infection.

Moreover, this change will not benefit research nor relieve the confusion and disbelief which blocks access to standard medical care for these patients. It will, however, preserve the acronym 'ME' – a historical logo which still retains its integrity in many parts of the world and which, if replaced, would not only add to the present chaos, but prove extremely expensive in terms of office stationery.

Historical Background: The earliest definitions were brief but succinct, based on clinical observation and accompanied by a checklist of symptoms. WALLIS (1995) provided a concise list with appropriate variations for children and adolescents, while RAMSAY (1956) introduced the descriptive term (Myalgic encephalomyelitis), which has stood the test of time over half a century in the UK, Europe, Canada and Austrialasia.

Fatigue States: These definitions first arose in the USA following the 1984 Lake Tahoe epidemic (which was misattributed to a Herpes Virus infection). Both the earliest definition (HOLMES et al, 1988) and its revision (FUKUDA, 1994) elevated tonsillitis, glandular enlargement and fatigue to unreal importance while overlooking the characteristic encephalitic features of the genuine illness. These mistakes also inflated the possibility of a psychiatric diagnosis, leading to the incorporation of such a heterogeneous population of psychiatric and non-psychiatric causes later on, that research groups of different persuasions were unable to compare results or evaluate treatment.

What Are the Facts: the tools we can use today to study the brain offer possibilities which were unimaginable 50 years ago. These include Molecular Biology: for example PCR – a microbiological technique capable of amplifying and identifying minute fragments of viral genes, hidden away in internal organs (such as brain, heart or muscle) while a test for rapid diagnosis (within five hours) is currently available. These tests indicate that viruses from the polio group, or related to it, are involved both in the late effects of ME and the Post Polio Syndrome. Brain Imaging: the use of CT, MRI, SPECT and PET scans clearly indicates that metabolic dysfunction in the brain stem and the spinal nerve radiations which transverse it, are initially associated with viral (inflammatory) damage and are the major cause of the cardinal symptoms of ME – central fatigue, stress induced weakness, autonomic nervous dysfunction and the breakdown of homoeostasis over hormonal and other vital functions.

Conclusion: Modern technology has now served to confirm and to detail the meticulous clinical and scientific observations made about ME before 1988! We can rest assured that this serious disability can arise (like polio) from an initially trivial infection which has epidemic and pandemic potential but we need to give further thought to any name change. We should, instead, be making maximum use of modern and effective means of diagnosis, prevention and management.

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ii. WHAT IS MYALGIC ENCEPHALOMYELITIS?
**by Canadian Dr. Byron Hyde 2017

Visit this site named in honor of ME/cfs patient, Florence Nightingale:
https://www.nightingale.ca/

Unfortunately, the majority of physicians in the UK, Europe and North America, not to mention the rest of the world, have a poor and sometimes distorted idea of what Myalgic Encephalomyelitis represents. One of the several fallacies is that M.E. is just another name for Chronic Fatigue Syndrome (CFS). It is not and never has been. M.E. is a biphasic epidemic and sporadic enteroviral infectious disease. Up to 1955 and the introduction of Jonas Salk's polio immunization M.E. tended to occur in the same location and at the same time as polio epidemics. In epidemic form, both Polio and M.E. tend to peak in the north temperate hemisphere during the period of July to November, with a last small blip around Christmas when families tend to get together.

CFS is a syndrome based upon a series of symptoms that are common to hundreds of different, often serious diseases and diagnostic of none. CFS can also represent multiple different pathologies or diseases in the same person. At times, CFS may be related to undiagnosed genetic illnesses. Many physicians assume patients with multiple symptoms and no easily observable pathologies are actually hysterical, anxiety neurosis or depressive patients. They employ the term CFS in place of making the unwelcome diagnosis of hysteria or psychiatric disease. The term CFS should not be utilized, as in the minds of most physicians it is a disparaging term, and in the minds of many physicians, a term belittling to the patient.

Understanding M.E. is relatively simple. However, understanding M.E. was much simpler sixty years ago. Prior to 1954, if the patient fell ill with M.E. their illness would have been called: Missed Polio. Missed polio was a diagnosis given prior to 1955, when the patients fell ill during a Poliomyelitis epidemic and were left disabled, weak, often in pain and with cognitive difficulties, but were not paralyzed. The term Myalgic Encephalomyelitis was a name developed to describe the disabling chronic injury sustained by the nurses and physicians of the Royal Free Hospital in London England in 1955. This epidemic was part of the combined epidemic of paralytic and missed poliomyelitis which struck across England and London that year. This was also the same year that the first major successful

paralytic polio immunization, the incredibly effective Jonah Salk immunization, began to be distributed in the United States of America.

The Salk immunization solved the problem of flaccid paralysis and death caused by the three known polioviruses but in 1955 Salk and colleagues didn't realize there were some hundred other dangerous enteroviruses which existed but had not yet been discovered. These missing links to the puzzle of acute and chronic enterovirus illness were not included in these Salk and later Sabin polio immunizations. Unknown to them, some of these other dangerous enteroviruses also caused flaccid paralysis and several caused what they referred to as missed polio, what we know since the 1950s as myalgic encephalomyelitis. Many of these other disease causing enteroviruses are very similar in genetic structure to the then known polio-enteroviruses. Many differ, one from the other, by less than 5% of their genomic (genetic blueprint) structure.

There are at least six or more enteroviruses causing paralytic or flaccid paralysis and I assume that one day they will all be included in the polio immunization. These relatively new enteroviruses appear to be on the ascendant.

In addition to Myalgic Encephalomyelitis, a partial list of enteroviral provoked diseases includes:
1. Poliomyelitis
2. Non polio-virus flaccid paralysis *
3. Meningitis*
4. Aseptic meningitis*
5. Epidemic pleurodynia, (also known as Bornholm disease, Devil's Grip) *
6. Hand, foot and mouth disease*
7. Type one diabetes, pancreatitis*
8. Peri-carditis and congestive heart failure*
9. Pneumonia and gastroenteritis viral deaths in the new-born
10. Haemorrhagic conjunctivitis (Apollo disease)
11. Bornholm disease, (a.k.a. epidemic pleurodynia, epidemic myalgia, devil's grip)
12. Type 1 diabetes mellitus *
In my experience those marked with an Asterisk have at times been associated with M.E.

Certain of the above disease spectrums have several things in common:
1. Where known, the shortest incubation period is 3-5 days, (short incubation allows epidemic spread)
2. A few: e.g. paralytic polio and M.E. are biphasic with early minor symptoms followed by severe chronic illness,
3. As in polio, the majority of those infected don't fall ill but tend to become immune for life,
4. Some are infected, show no signs of illness but become carriers, infecting other people,
5. Some fall ill for a few days or weeks and then recover,
6. Some fall ill, improve and get better only to have recurrent chronic illness, sometimes years later,
7. Some fall ill and remain chronically ill and disabled, and among adults, often for life,
8. Some die and, according to Dr. Ivar Wickman, some patients are identified as other illnesses including:
a. Landry's paralysis (both ascending and descending Guillain–Barré syndrome)
b. Chronic pain syndromes and
c. Patients with cognitive difficulties.

The enteroviruses causing paralytic polio or flaccid paralysis are typical of this class of viruses. Less than 5% of patients who fell ill with poliomyelitis were paralyzed or died. When M.E. patients die, they tend to be diagnosed as having had other cause such as encephalitis or an abrupt cardiac death. One of the pathologic vascular injuries given in this description of M.E. patients was found in M.E. patients who died during the 1934 Los Angeles epidemic.

There is also a major forgotten tragedy associated with the Salk and Sabin polio immunizations. These immunizations were so rapidly successful in preventing paralytic poliomyelitis that immediately after its release the number of cases of deaths and paralysis caused by the three known polioviruses ceased almost overnight in much of the western world. Nobody realized the number and extent of these some 100 different but similar enteroviruses in 1955 or the pathologies they continue to cause. Within ten years of the release of these immunizations, probably as many as 50,000 enteroviral researchers around the world were dismissed or their funding removed. Almost none of these enteroviral experts were left to work on the largely unknown enteroviruses causing M.E. and the other severe enteroviral

diseases. I have no doubt 100,000 deaths or more occur every year around the world due to these enteroviruses. I have no doubt 100,000 cases of chronically disabling Myalgic Encephalomyelitis occur around the world every year.

The Invisible Disease: The tragedy persists today. There is yet no curative treatment or immunization for M.E. or any of these enteroviral illnesses. Other than for the three polioviruses, there are no preventive immunizations. Because M.E. so rarely kills, it has become an almost invisible disease. Yet several enteroviral infections in their most severe form result in various chronic disabilities and some in paralysis and death, in addition to causing a tremendous economic burden to the state. There is no doubt that enteroviruses cause M.E. To date, the only viruses recovered consistently in any epidemic of myalgic encephalomyelitis disease have been enteroviruses. This is the virus family we recovered in Canada during the 1984 North American pan-epidemic that struck Lake Tahoe, North Carolina, Montreal, and across Ontario and in all subsequent M.E. patients where a viral cause was found. A table created represents some of the significant number of enteroviruses from this group of M.E. patients. There is no reason to believe that these 20 cases from my patients represent a complete list. These were all recovered from my Canadian and USA patients. It is obvious, as in Poliomyelitis where more than 6 different enteroviruses (not just the accepted three included in the Salk and Sabin immunizations) cause flaccid poliomyelitis, there are several enteroviruses which cause Myalgic Encephalomyelitis. This tree graph demonstrates as many as 20 or more enteroviruses, which can cause M.E. The following tree-map, of the numerous enteroviruses associated with M.E., was prepared from my patients by Drs. Carron Nairn, Daniel Galbraith and CG Clements, then at Ruchill Hospital, Glasgow during the period 1984-1992.

To understand Myalgic Encephalomyelitis it is easier to describe the pathology of both polio and M.E. diseases together since they are so similar in terms of their pathophysiology. If you think physicians know so little about Myalgic Encephalomyelitis, it is also amazing how little physicians today know about paralytic poliomyelitis. So consider the following a brief refresher course on both illnesses, and as mentioned previously, both caused by several very similar enteroviruses. The enteroviruses that cause all of these illnesses, including poliomyelitis and Myalgic Encephalomyelitis, are 95% identical in terms of the genomic (genetic) structure. Let us start with Paralytic Poliomyelitis.

Poliomyelitis: is a fulminant enteroviral vasculitis, which injures the anterior horn cells and the small arteries nourishing the anterior horn cells. This vasculitis can attack the entire body but particularly the central nervous system, (brain, brain stem and spinal cord) but primarily the three polioviruses attack (a) the brain stem and (b) the anterior spinal cord that provides essential nerve conduction to the muscles. The anterior horn cells are the motor neuron nuclei that supply the muscles with their electrical ability to contract and relax and to allow all normal movement, including breathing. The anterior horn cells act very much like an electrical terminal in a house electric circuit.

The Accepted Theory: It is generally accepted that paralytic poliomyelitis is caused by at least three different enteroviruses attaching to polio-enteroviral receptors in the neurons of the anterior horn cell nuclei and destroying that neuron, causing neuronophagia and paralysis. Most of these findings were from animal studies and the question may well be asked, were they primarily looking at the anterior horn cells in a follow-the-leader fashion of many researchers. This of course is a very presumptuous statement. Dr. Van Wart and Dr. Marinacci stated that a few researchers, including themselves, also noted cuffing around the arterioles leading to the anterior horn cells in both paralytic polio and in M.E. patients. According to them, end-arteriole clotting leading to the anterior and posterior horn cells also existed in both M.E. and paralytic polio. The difference was the degree and severity of vascular and anterior horn cell injury. Individuals are still being paralyzed and still dying from both polio and non-polio enteroviruses. Autopsy material should be re-examined while we still have time to be verify whether these accepted truths are the only truths in the cellular causes of pathology. The following is an alternative theory that might be considered.

The Site of Injury: The following Wikipedia photomicrograph is one of the two vascular injuries seen routinely in both paralytic poliomyelitis and myalgic encephalomyelitis. Polioviruses and other enteroviruses cause (a) an obstruction and (b) cuffing of blood vessels and (c) neuronophagia of the anterior horn cell nerve nuclei in the spinal cord as you see in the following micrograph. Obviously the entire area will be bathed in enteroviruses. If the blood arterioles going to the anterior horn cell are blocked by inflammatory lymphocytes, no blood, no nutrients, and no oxygen arrive to the anterior horn cell. The anterior horn cell then shrivels and dies. If sufficient anterior horn cells are killed, the patient will be paralyzed. Depending upon the severity and locations of the obstruction, the individual can (a) escape

visible injury and symptoms, (b) be weakened, (c) be temporally paralyzed, (d) be permanently paralyzed, (e) die or escape illness entirely and possibly become immune for life. There is a photograph of the arteriole blocked due to the polio-virus type 3, (also referred to as Leon polio strain). In paralytic polio there are considerable numbers of such injuries. This lesion also occurs in M.E. but in most, but not all cases there are probably too few injuries to cause death and paralysis. You can easily see the red inflammatory blood clot within the arteriole to the lower left.

Circa 1940, Sabin autopsied monkeys to determine the cause of "non-paralytic" polio. First, there was no question that perivascular cuffing was evidence of an acute inflammatory response and thereby caused marked internal damage to the spinal cord as well as to brainstem neurons. Personal communication to B Byron Hyde from Dr. Richard Bruno.

There is no doubt that both cuffing and arteriole obstruction occurs in both M.E. and CFS. Two microscopic slides illustrate both cuffing and arteriole inflammation in the presence of dead Anterior Horn Cells in paralytic polio. From these slides alone it is irrational to consider that paralytic polio was only an injury of the anterior horn cells. Both polio and Myalgic Encephalomyelitis are vasculitic conditions. The only significant difference between the two anatomically is the proclivity of where each of the two groups of enteroviruses causes most damage. The several (4+) enterovirus groups causing flaccid paralysis attack primarily from the brain stem down through the spinal cord. The 20-plus enteroviral groups observed by Galbraith and Nain in our M.E. patients, attack primarily above the brain stem. Ivar Wickman's work, following the 1905 paralytic polio epidemic in the Stockholm area, prompts the reasonable belief that polio epidemics were not simply epidemics of one enterovirus but a mixed bag of enteroviruses, a shot-gun blast of enteroviruses causing multiple types of injuries. This is more convincing when one observes that both polio and Myalgic Encephalomyelitis occurred in the same epidemics at the same time and the same place up to 1955, specifically in Los Angeles County Hospital, Akureyri Iceland and Royal Free Hospital.

The following two microscopic views of paralytic polio spinal cord tissue demonstrate both vasculitis of arterioles with (a) inflammation and (b) cuffing of arterioles occurred in the same patients who died of paralytic poliomyelitis. The first historic black and white slide shows:

The anterior horn cell is in the centre of the slide with a black arrow and the pathological arterioles are at 9, 11 & 1 O'clock of the anterior horn cell. Sir W. Russell Brain in his 1940 textbook, Diseases of the Nervous System, page 445, gave a microscopic view of both neuronophagia (death) of the anterior horn cell associated with both inflammatory infiltration and cuffing of the blood arterioles supplying the anterior horn cell (indicated with an arrow) in the same microscopic field.

Microscopic views of several dead anterior horn cells in left side and cuffing of arteriole in the lower right in paralytic polio patient. A second microscopic slide, in colour, shows multiple anterior horn cell deaths (approximately 6 solid red neurons with a white halo to the left) and one larger arteriole on the right with a ring of round cells cuffing the artery.

Myalgic Encephalomyelitis: Vascular Cuffing is one of the two arteriole injuries in both (a) Poliomyelitis and (b) Myalgic Encephalomyelitis. "Cuffing" is the second type of vascular injury seen in the three polio viruses and I assume in the several M.E. provoking enteroviruses. Since few M.E. patients die, there has been little research on anatomical cause since the work by Dr. Van Wart. This vascular pathology is equivalent to a valve regulating blood flow to the anterior horn cells. Instead of the arteriole being blocked, it is "cuffed" with a necklace of round cells or lymphocytes around the outside of the blood vessel wall or epithelium. This is not new information. This vascular injury was first published by the neurologist Doctor Alberto Marinacci and neuro-pathologist Dr. Van Wart, following the combined Poliomyelitis and Myalgic Encephalomyelitis epidemic at the Los Angeles County Hospital in 1934, where a few M.E. patients died. There is good reason to believe that cuffing is one of the principal pathologies seen in M.E. brain vasculitis injuries.

The microscopic photograph illustrates *cuffing,* the second basic vascular pathology occuring in both polio and M.E. The round cell cuffing necklace are the small dark reddish black speckles ringing the blood vessel. This cuffing may also be the pointer for affective treatment. If the spasm caused by cuffing can be alleviated, one may be able to treat M.E. effectively.

If the individual suffers arteriole cuffing two things can happen. But first I have to explain a bit of normal vascular physiology. If you go to a medical lab to have blood taken, a small needle is inserted into a vein in the patient's arm to draw

off blood. It may not be pleasant but done properly it doesn't hurt. It doesn't generally hurt since veins have a relative absence of nerve cells and accordingly very little associated pain. Sometime a doctor has to take arterial blood. This is infrequent but it is necessary at times and it can hurt a great deal if the area is not anaesthetized or "frozen". The reason is that arteries and arterioles have a significant complement of sensory nerves. Nerve pain is a survival mechanism genetically built into mammals to prevent them endangering themselves and injuring the life sustaining arteries.

(a) Accordingly, arteriole cuffing is associated with pain. The round cells place a stranglehold on the pain sensitive arteriole, preventing the relaxation and expansion of the artery. This in theory can cause muscle pain and muscle fatigue since inadequate perfusion exists. This is just one of the reasons some M.E. patients can have significant pain on activity. However, in the brain such cuffing would limit circulation to the memory and administrative CNS nuclei. Over time this muscle and head pain usually decreases substantially. In adults, the cognitive abilities also tend to improve in some people over the first two years and return to near normal, but those who have not improved cognitively within two years, tend to remain permanently CNS disabled. (b) The analogy with paralytic polio is obvious. In polio, if the patient has not recovered significantly in two or three weeks, they remain paralyzed for life in the same way that most M.E. patients remained disabled. (c) Vascular cuffing acts as a stopcock valve regulating blood flow to the muscles, the brain's operating functions and possibly to organs and glands. In engineering terms, cuffing operates like a valve or carburetor regulating the flow of liquid or gas to an engine. (d) I have mentioned one of the causes of M.E. pain. Perhaps it is more readily understood when you consider the body's most important muscle: the heart. The body has several built-in protective mechanisms, one of which is pain. If the coronary arteries supplying blood to the heart muscle are damaged and further activity does more than the heart can tolerate, severe chest pain can result due to the nerves pain in the coronary arteries *(i.e.angina,).* This pain can stop the individual in their tracks and hopefully prevent sudden death due to cardiac muscle injury. Muscle pain in the (i) legs (ii) arm and (iii) intercostal muscles, necessary for breathing, cause the individual to slow down or stop, preventing permanent injury to these muscles.

Cuffing is probably only one of the several pain-generating actions that occur in some Myalgic Encephalomyelitis patients. When physicians studying M.E. talk

about autoimmune injury in these patients, it is probably mediated through the cuffing around the arterioles. Cuffing in the brain arterioles may be one of the causes of severe pain early in the disease in some people, which tends to prevent any significant activity and thus prevents permanent brain injury. Certainly, cuffing in the brain arterioles is one of the causes of subsequent memory and cognitive disability in the chronic illness. Van Wart, who I mentioned earlier, also found injuries in the posterior horn cells of the spine in M.E. patients. If they exist in the lower CNS, there is no reason to believe these do not also exist in the upper CNS arterioles, in the brain. Due to the extreme cost of testing, I have not been able to seriously investigate the role of oxygen and nutrient lack to mitochondrial ATP production and mitochondrial death. This is surely another cause of pain and exhaustion. Mitochondria, the multiple small energy factories in all cells, are the body's energy source. Many years ago, at the University of Miami, mitochondrial death was noted on electron microscope investigation of M.E. tissue.

What is the difference if both vascular obstruction and cuffing of arterioles can occur in both M.E. and Poliomyelitis? I believe the major difference between paralytic poliomyelitis and myalgic encephalomyelitis injury is the location where the two similar enteroviral groups attack the central nervous system (CNS). I so strongly believe this, that it is a wonder someone hasn't referred to M.E. as The Forgotten Polio.

Initially, both polio and M.E. causing enteroviruses enter the body through the mouth and to a lesser extent through the respiratory system descending to the gastric system where they may cause chronic infections. From the stomach and vagus nerve different enteroviruses migrate to various target organs. The enteroviruses causing polio and M.E. injure the vascular system of the central nervous system: (The central nervous system or CNS includes both the brain and spinal cord.) Some enteroviruses have a predilection for the heart causing congestive heart failure and others to the pancreas causing diabetes.

The more we know about enteroviruses the more we realize how dangerous there are. Depending upon the age of the infected individual, the attack site may differ. In a young child, enteroviruses may cause polio or dermatitis (hand food and mouth disease). But the same virus family can also cause M.E. or encephalitis or even pneumonia in an adult. Both age and organ sensitivity may be associated with different diseases caused by the same family of rapidly mutating enteroviruses.

The Major Difference between Polio and M.E. causing enteroviruses.
Poliomyelitis strikes the entire central nervous vascular system, but the primary attack site is from the brain stem down through the spinal cord. This causes the well known associated polio related paralysis and death.

Myalgic Encephalomyelitis (M.E.) also strikes the entire central nervous system vasculature, but primarily above the brain stem in the upper central nervous system vasculature of the brain. This injury is what causes the well known cognitive, sensory, motor and administrative brain dysfunctions. It is assumed the injury is the cuffing injury already mentioned and this cuffing effect is illustrated in the brain map of an actual M.E. patient seen immediately below.

This vascular injury in the brain can be demonstrated in the live patient with HMPAO SPECT Segami Oasis brain scan software. The severity of M.E. can be assessed by (a) the degree of bilateralism (left and right hemisphere injury), (b) by the cortical locations of the perfusion injuries and (c) the degree of standard deviations perfusion injury below normal in any given cortical area dictate the degree and type of disability.

The areas most affected in (this) patient are:
1. The severe, entire anterior temporal lobe (causing memory & administrative dysfunction),
2. The motor cortex at the posterior frontal lobe (causing injury to muscle strength and coordination),
3. The anterior superior cerebellum (balance and coordination mechanisms)
4. The insular cortex, which is a principal area regulating cardio-vascular homeostasis, function, timing and regularity.

By definition employing SEGAMI Oasis software: all M.E. patients have a perfusion damaged anterior temporal lobe and damaged cingulate gyrus. Following enteroviral infection a 30-year-old health care worker first developed Myalgic Encephalomyelitis. This was a classical M.E. injury in which the entire anterior temporal lobe was injured along with the anterior and posterior cingulate gyrus of the limbic system. (Limbic injury in M.E. was first described by Dr. Jay Goldstein in 1989.) The SPECT perfusion injury in this patient is extensive and includes the Insular Cortex. She then developed both M.E. and a severe associated cardiac

regulatory disease that required an implanted cardiac pace maker. She developed not only dysautonomia and POTS (Postural Orthostatic Tachycardia Syndrome) but a most irregular cardiac function. A pacemaker was installed to help control the irregular cardiac function. Autonomic cardiac dysfunction is so consistent with insular injury a patient with cardiovascular dysautonomia can be diagnosed by observing the decreased insular lobe perfusion.

This SPECT map of the brain seen above, particularly of the anterior temporal lobe and cingulate gyrus of the limbic system is where the negative aspect of enteroviral induced vascular cuffing plays its dramatic role. When this or any similar patient has to employ their intellectual or administrative or physical brain capacities, these vascular areas tend to go into spasm and shut down and the patient becomes rapidly cognitively and physically exhausted. Depending upon the degree of injury, it may take days or longer to return to the already injured capacities. If the injury extends to the Insular cortex, cardiovascular irregularity always occurs.

This publication was developed in association with Dr. Sonia Neubauer Grunberg, Clinica Los Condes, Santiago Chile. The information gathered in this publication would not have been possible were it not for the Federal and Provincial health care systems in Canada which funded all of the brain SPECT examinations, and the historical, and technical examination of countless M.E. patients. I wish also to extend my sincere appreciation of the technical assistance of the brain imaging departments of (a) the University of Laval, Quebec, (b) Dr. Jean Leveillé, Sorel Hospital, Quebec, (c) Dr. Marc Freeman, Credit Valley Hospital and Mount Sinai Hospital, Toronto Ontario, (d) the Ottawa Hospital, Civic Campus, and (2) Dr. Sonia Neubauer Grunberg Clinica Las Condes, Santiago, Chile. I wish also to thank Dr. Peter Rowe, Johns Hopkins University School of Medicine for his kind and considerate advice over the many years. The brain mapping would not be so obvious were it not for the brilliant work of Philippe Briandet who along with Dr. Ismael Mena from UCLA and the University of Santiago, Chile developed the Segami Oasis Neurogram brain mapping software. The enteroviral investigations were made possible by Drs. Carron Nairn, Daniel Galbraith and CG Clements, then at Ruchill Hospital, Glasgow during the period 1984-1992. The pathological findings of cuffing and arterial obstruction of the anterior horn cells were demonstrated to me by the late Dr. Alberto Marinacci and Dr. Van Wart at the Los Angeles County Hospital. Dr. Jay Goldstein and the late Dr. Ismael Mena introduced me to the utility of

SPECT brain mapping and the injuries to the temporal lobe and limbic system as a primary basis of understanding M.E. brain dysfunction. Injury to the brain's limbic system and anterior temporal lobe so clearly defined the essential CNS pathology in this chronic post-infectious enteroviral disease.

NOTE: ***I submitted stool tests via mail for analysis to EnteroLab (registered with the US Government's Department of Health and Human Services). Dietary changes were required due to multiple sensitivities including genetic gluten, lactose and glucose intolerance causing inflammation, nausea, diarrhea, pre-diabetes, arthrosis. EnteroLab was created by Dr. Kenneth Fine who had crippling, food intolerance related arthritis in his teens. I had increasing arthrosis of joints. Both respond to hyaluronic acid injections. Dr. Fine's products can be ordered on-line and shipped: www.enterolab.com. Patients need clean food, water, air and shelter. A liquid diet of soups may be easiest for severe ME/cfs.***

iii. VALACYCLOVIR TREATMENT OF POST VIRAL FATIGUE SYNDROME

*****by American Dr. Martin Lerner, updated 2022**

Dr. A. Martin Lerner (1929-2015) spent 25 years researching into the possible causes and treatments of CFS/ME.

Executive Summary

Chronic Epstein-Barr virus and other human herpes viruses may be a cause of long term symptoms in chronic fatigue syndrome. Treatment with anti-virals is effective in restoring sufferers to health.

The Dr. A. Martin Lerner CFS Foundation was formed to ensure that Dr. Lerner's 25 years of CFS/ME-specific work was recognized, and communicated to CFS/ME sufferers and physicians worldwide. The Foundation, established in early 2007, conducted a major study (see next section), which documented his successful treatment. Investigators who had extensive backgrounds in information technology, application development, business processes and communications conducted the 18-month study. Data from the study produced significant findings and yielded peer-reviewed medical publications, global interest and presentations.

Abstract of Dr Lerner's paper

Please see Lerner, A. Martin et al (2010). "An update on the management of glandular fever (infectious mononucleosis) and its sequelae caused by Epstein–Barr virus (HHV-4): new and emerging treatment strategies." *Virus adaptation and treatment* 2: 135 – 145.

"Purpose: Beginning in 1993 at a single chronic fatigue syndrome (CFS) treatment center, we began studies that demonstrate Epstein–Barr virus (EBV) nonpermissive replication. In the most recent study performed, EBV nonpermissive replication is the cause of 28.3% of 106 consecutive CFS cases, and is etiologic with human cytomegalovirus (HCMV) and/or human herpes virus 6 (HHV-6) as a coinfection in an additional 52.8% of CFS cases. Therefore, EBV is causally involved in 81% of cases of CFS. Further, EBV CFS is effectively treated with long-term valacyclovir. Coinfection HCMV and HHV-6 CFS requires valganciclovir with valacyclovir."

Patients and results: The validated Energy Index Point Score® (EIPS®) (see MEpedia Article on EIPS) monitors severity of CFS illness and its recovery. A specific CFS diagnostic panel identifies EBV CFS subsets. Four separate EBV CFS therapeutic studies of several hundred CFS patients describe valacyclovir

administration and long-term patient recovery. With valacyclovir, serum EBV titers (EBV, early antigen (diffuse); EBV, viral capsid antigen, immunoglobulin M); 24-hour electrocardiography Holter monitors; and cardiac dynamic studies improve.

Conclusion: Nonpermissive EBV infection is causal in a significant proportion of CFS cases. EBV CFS is safely and effectively treated with long-term valacyclovir."

Post Viral CFS may be due to low level chronic infection with Epstein-Barr Virus or "Mono" and others.

Martin Lerner had been working since 1993 on the idea that many cases of chronic fatigue syndrome result from longstanding infection with herpes viruses. The most important of these is Epstein-Barr virus (glandular fever or "mono"), but he had also identified two other herpes viruses as a particular problem in CFS/ME sufferers, namely cytomegalovirus and human herpes virus 6 (HHV-6). He demonstrated that in CFS/ME sufferers there is non-permissive replication of virus. By this he meant that there is sufficient viral replication going on in cells to disrupt cellular metabolism and cause cell death, but not sufficient to result in a positive DNA polymerase test, or antigenemia with antibody response. This means that such chronic infection will not be picked up by standard virology tests including antibodies and PCR. This very much echoes the ideas of *******Dr John Chia, who believes that many patients with chronic fatigue syndrome have ongoing viral infection which he describes as being "under the radar", i.e. the immune system does not seem to see it. This is a little bit like HIV infection, where the virus tucks itself away inside cells, again so the immune system cannot "see" it.* **See Oxymatrine in the treatment of post viral fatigue**

Four studies showing that long term antivirals work

Lerner looked at 106 consecutive cases of CFS/ME and found the presence of Epstein-Barr virus alone in 28% of these cases, in a further 53% of cases there was Epstein-Barr virus combined with cytomegalovirus, or HHV-6, which means that Epstein-Barr virus was involved in a total of 81% of patients with CFS/ME.

Most importantly, he went on to show that the Epstein-Barr virus could be treated effectively with an anti-viral valacyclovir and if there is co-infection with HCMV or HHV-6 then some trials used valganciclovir in addition to the valacyclovir. He reported good responses to treatment. Indeed, he reviewed four studies involving several hundred patients with CFS using this combination of drugs and reported long term patient recovery. This recovery was determined in terms of clinical

improvement, improvement in serum EBV titres (with regard to EBV virus, early antigen (diffuse), EBV viral capsid antigen and immoglobulin-M), together with improvements in 24 hour ECG and improvement in cardiac dynamic studies.

So what are the criteria for initiating treatment with Valacyclovir and possibly also Valganciclovir?

A high proportion of patients that I see with CFS/ME do very well on the standard regimes of diet, nutritional supplements, sleep, pacing, attention to mitochondrial dysfunction, thyroid and adrenal support. However, there is always a hard core of patients who, despite sticking to these regimes well, do not see the deserved improvements. These are the people for whom these drugs may be helpful. So what are the criteria?

An obvious initiating infection with Epstein-Barr virus and positive IgM tests and/or positive IgG tests shows that there has been exposure to Epstein-Barr in the past and there could well be ongoing non-permissive replication now.

If there is no IgG antibody to Epstein-Barr virus, then this indicates no prior infection and therefore no indication of the treatment.

Lerner also looks at other antigens, namely D (diffuse) and R (restricted) components of EVB early antigen (EA) to indicate non-permissive incomplete virus replication. I am not sure if this test is available and I will make enquiries. However, my view at this stage would be that anybody with a viral trigger, positive IgM and/or IgG antibodies and who has not responded to the above regime would be a candidate for a trial of Valacyclovir.

We then have to ask the question if there is any evidence of cytomegalovirus (CMV) or HHV-6 infection, which would require additional treatment with Valganciclovir. From his paper it does not appear that these two viruses are candidates for non-permissive replication and therefore it should be straightforward to diagnose these simply by doing IgG antibody studies for these two viruses.

In addition, for EBV and CMV chronic infections, I also have the Armin laboratories Elispot tests available - see Armin Order Form October 2018 - tests 26 and 29.

As part of his work up, Lerner also does 24 hour ECG monitoring and the abnormalities he most commonly picks up are oscillating T-wave flats and inversions, together with tachycardia at rest. My guess here is that these cardiac

abnormalities reflect mitochondrial dysfunction and poor energy delivery to the heart because of the cellular disruption resulting from chronic viral infection.

So to diagnose Epstein-Barr virus subset chronic fatigue syndrome requires the following positives:

- **International criteria for CFS**
- **24-hour ECG monitor, oscillating T-wave flats and inversions**
- **Tachycardia at rest**
- **Epstein-Barr virus, early antigen (diffuse) total antibody with or without viral capsid antigen IgM**
- **Negative tests for acute co-infections such as Mycoplasma pneumoniae, Babesia microti, borrelia burgdorferi, Anaplasma phagocytophilic IgG, antistreptolysin O.**

Monitoring treatment

Lerner monitored treatment using the Energy Index Point Score (EIPS - see table below) with patients visiting every four to six weeks and the score determined by agreement of patient and physician. A score of 0 – 5 is diagnostic of chronic fatigue syndrome, a score of 6 – 10 indicates patients no longer have CFS. This means a small change in the EIPS value is very clinically significant with an effect size of 0.8 being large. A CFS patient is considered to be a responder if the effect size is more than 1, or a non-responder if the effect size is less than 1 after one year of anti-viral therapy.

Treatment regimes

Valacyclovir was prescribed at a dose rate of 1 gram every six hours (i.e. 4 grams per day). For overweight patients the dose was 1.5 grams every six hours and for small patients correspondingly less. A "Herxheimer" response with worsening of symptoms and a worsening score continuing for two to six weeks after treatment began was a good prognostic omen. Increasing energy score and decreasing symptoms were apparent at the fifth to sixth month of continuing Valacyclovir. As the drug was continued, EIPS values of 7 and above were achieved and activities of normal living restored.

The above clinical improvements were accompanied by improvement in ECG monitoring.

Alcohol is forbidden. Exercise too early in CFS recovery may worsen CFS and so exercise was prohibited until EIPS 7 was achieved. At EIPS 8, light exercise is cautiously begun. The Valacyclovir dose is then decreased to 1 gram twice a day, continued for 6 to 12 weeks and then stopped. Approximately 20% of EBV CFS patients required maintenance Valacyclovir to prevent clinical relapse.

The Energy Index Point Score

CHRONIC FATIGUE SYNDROME	
0	Bed-ridden, up to bathroom only
1	Out of bed 30-60 minutes a day (sitting in chair is out of bed)
2	Out of bed sitting, standing, walking 1-2 hours per day
3	Out of bed sitting, standing, walking 2-4 hours per day
4	Out of bed sitting, standing, walking 4-6 hours per day
5	Perform with difficulty sedentary job 40 hours a week, daily naps
RECOVERY	
6	Daily naps in bed, may maintain a 40 hour sedentary work week plus light, limited housekeeping and/or social activities
7	No naps in bed. Up 7.00am to 9.00pm Able to work a sedentary job plus light housekeeping
8	Full sedentary workweek, no naps, some social activities plus light exercise
9	Same as 8 above plus exercise approximately ½ to 2/3 normal withou excessive fatigue, awakens next morning refreshed
10	Normal

Lerner goes on to report on the outcomes of four studies using these regimes. The four studies involved 19, 11, 27 and 106 patients which give similarly good results. Energy consumption and physical activity both improved as did heart symptoms and ECG abnormalities.

In these groups between 10% and 25% required full dosage long term therapy to maintain an EIPS value of more than 7. Valacyclovir has been continued for seven years in patients without ill effects. He comments that patients appreciate the good prognostic omen of an early Herxsheimer response.

Study 1:"A six-month trial of valacyclovir in the Epstein-Barr virus subset of chronic fatigue syndrome: improvement in left ventricular function." Drugs Today. 2002;38(8):549–561 Lerner AM, Beqaj SH, Deeter RG, et al. Please see "A six-month trial of valacyclovir in the Epstein-Barr virus subset of chronic fatigue syndrome: improvement in left ventricular function.". This study concluded favourably on the use of valacyclovir in CFS patients.

Study 2: "A small randomized placebo controlled trial of the use of antiviral therapy for patients with chronic fatigue syndrome." Clin Infect Dis. 2004;32:1657–1658 Lerner AM, Zervos M, Chang CH, et al. Please see "A small randomized placebo controlled trial of the use of antiviral therapy for patients with chronic fatigue syndrome." Patients initially were treated with just valacyclovir, but after six months those patients with co-infection were also given intravenous valganciclovir. There is a slight confusion here because Lerner goes on to say that both valacyclovir and valganciclovir were necessary for these patients to recover without specifying when the valganciclovir was administered.

Study 3: "Valacyclovir treatment in Epstein-Barr virus subset chronic fatigue syndrome: thirty-six months follow-up." In Vivo. 2007 Sep-Oct;21(5):707-13. Lerner AM, Beqaj SH, Deeter RG, Fitzgerald JT. Please see "Valacyclovir treatment in Epstein-Barr virus subset chronic fatigue syndrome: thirty-six months follow-up." Good results were achieved with just valacyclovir.

Study 4: "Subset-directed antiviral treatment of 142 herpesvirus patients with chronic fatigue syndrome." Virus Adapt Treat. 2010;2:1–11. Lerner AM, Beqaj S, Fitzgerald JT, et al. Please see "Subset-directed antiviral treatment of 142 herpesvirus patients with chronic fatigue syndrome." Again good results were achieved with just valacyclovir.

Conclusions

These regimes work well. Valacyclovir long term used to be an expensive therapy. Lerner's costing for valacyclovir tablets for 1 gram every six hours was of the order 25-30 thousand dollars per year. The cost has recently come down a lot as the patent has run out. There is no doubt that valacyclovir is a very useful treatment for patients and my recommendation at present is to reserve this for those who do not respond to the standard nutritional work ups.

List of additional Published Papers by Dr Lerner - herpes viruses and CFS/ME

- "A paradigm linking herpesvirus immediate-early gene expression apoptosis and myalgic encephalomyelitis chronic fatigue syndrome"
- "A unified theory of the cause of chronic fatigue syndrome"
- "Abnormal left ventricular myocardial dynamics in eleven patients with chronic fatigue syndrome"
- "Abortive lytic Epstein–Barr virus replication in tonsil-B lymphocytes in infectious mononucleosis and a subset of the chronic fatigue syndrome"
- "Cardiac Involvement in Patients with Chronic Fatigue Syndrome as Documented with Holter and Biopsy Data in Birmingham, Michigan, 1991-1993"
- "Editorial response- microbial persistence and idiopathic dilated cardiomyopathy"
- "IgM Serum Antibodies to Epstein-Barr Virus are Uniquely Present in a Subset of Patients with the Chronic Fatigue Syndrome"
- "Immunoassay with cytomegalovirus early antigens from gene products p52 and CM2 (UL44 and UL57) detects active infection in patients with chronic fatigue syndrome"
- "New Cardiomyopathy- Pilot Study of Intravenous Ganciclovir in a Subset of the Chronic Fatigue Syndrome"
- "Prevalence of Abnormal Cardiac Wall Motion in the Cardiomyopathy Associated with Incomplete Multiplication of Epstein-Barr Virus and/or Cytomegalovirus in Patients with Chronic Fatigue Syndrome"
- "Repetitively negative changing T-waves at 24-h electrocardiographic monitors in patients with the chronic fatigue syndrome (left ventricular dysfunction in a cohort)"

Related Articles

- Chronic Viral Presence in CFS/ME
- Oxymatrine in the treatment of post-viral-fatigue

External Links

- **Lerner, A. Martin et al (2010). "An update on the management of glandular fever (infectious mononucleosis) and its sequelae caused by Epstein–Barr virus (HHV-4): new and emerging treatment strategies." *Virus adaptation and treatment* 2: 135 – 145.**
- **MEpedia Article on EIPS**
- **Armin Order Form October 2018**
- **"A six-month trial of valacyclovir in the Epstein-Barr virus subset of chronic fatigue syndrome: improvement in left ventricular function."**
- **"A small randomized placebo controlled trial of the use of antiviral therapy for patients with chronic fatigue syndrome."**
- **"Valacyclovir treatment in Epstein-Barr virus subset chronic fatigue syndrome: thirty-six months follow-up."**
- **"Subset-directed antiviral treatment of 142 herpesvirus patients with chronic fatigue syndrome."**
- **"A paradigm linking herpesvirus immediate-early gene expression apoptosis and myalgic encephalomyelitis chronic fatigue syndrome"**
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- **"Prevalence of Abnormal Cardiac Wall Motion in the Cardiomyopathy Associated with Incomplete Multiplication of Epstein-Barr Virus and/or Cytomegalovirus in Patients with Chronic Fatigue Syndrome"**

- **"Repetitively negative changing T-waves at 24-h electrocardiographic monitors in patients with the chronic fatigue syndrome (left ventricular dysfunction in a cohort)"**
- **"Validation of the Energy Index Point Score to Serially Measure the Degree of Disability in Patients with Chronic Fatigue Syndrome"**

NOTE: ***My off the charts, reactivated EBV (#4 in the herpes virus family) was eventually diagnosed in 2015. However, once a virus like polio is considered to have been eradicated by vaccines, it is apparently not studied in medical schools and leads to mis-diagnosis. In my case Atypical Polio became mumps. The more pathogens, the more confusing the diagnosis and symptoms. I ended up with 60 symptoms and was gradually prescribed 40 different medications over time. All of them had their own side effects. I collected empty pharmaceutical containers because a local school was sending them to Africa: in just one year I had a large paint bucket over-flowing with plastic pill bottles.***

iv. HERBAL IMMUNODULATOR – OXYMATRINE
****** by Asian American Dr. John Chia**
updated by Cort Johnson 2009

Dr. Chia, an infectious disease specialist focusing on ME/chronic fatigue syndrome (ME/CFS), has finished the production of a pure form of Oxymatrine, an alkaloid derived from the *Sophora plant in China. Oxymatrine is used to treat many diseases including hepatitis and cancer there. Oxymatrine has been an important part of Dr. Chia's protocol for several years and it played an integral role in returning his son, Andrew Chia, to health. The concern over the purity of products coming from China prompted Dr. Chia to produce a more stable and effective preparation of Oxymatrine called Equilibrant. He took the opportunity to add other immune factors to the mix. *He stated that Equilibrant, contains oxymatrine and a number of immune modulators.* This herbal preparation, a dietary supplement, is made from the highest quality extracts under FDA certified Good Manufacturing Practices (cGMP) in the United States. It is also laboratory tested in FDA registered analytical laboratories.

A Main Focus of Treatment – For many years Dr. Chia used interferons and Oxymatrine to treat his patients but he has dropped interferon use for all but one subset of patient. When I asked him about the efficacy of Oxymatrine a as a stand-alone treatment he stated:

I have treated 70 patients with the combination of alpha and gamma interferon, and the efficacy is about 47% overall. I reserve the interferon treatment for patients with severe fibromyalgia without debilitating fatigue. The cost is prohibitive ($5000/ month) and the side effect does not allow patient to continue the treatment for more than 1-3 months. Few patients had remission of symptoms for as long as 2-3 years. The chance of improvement is minimal, If the myalgia is not dramatically better by 2-4 weeks on interferon treatment.

Since the herbal preparation is much cheaper, has better efficacy and less side-effects, I have not used interferon treatment for over a year. I learned to titrate the dose of the herbal preparation for patients with different symptomatology. Dosing – Chronic fatigue syndrome (ME/CFS) – The dose of Equilibrant should be increased slowly. I routinely start with one tablet with a glass of water before or with meal everyday for one to two weeks. If there is no increase of pre-existing symptoms, such

as fatigue, myalgia, headache, the dose could be increased to one tablet 2 times a day for one to two weeks, then slowly work up to 2 to 3 tablets 2 times a day. No further escalation of dose should be done if there is significant increase in symptoms. Further titration can be done later as needed, depending on the patient's response and tolerance.

Fibromyalgia – Patients with significant fibromyalgia rarely need more than 1 tablet once or twice a day, but few can take up to 4-6 tablets/day. Pain can decrease as soon as 2 weeks, often after an initial increase of myalgia. If the increase in pain persists for few weeks without improvement while taking one or two tablets/day, the patient will not likely respond and certainly should not take higher doses.

Patients on heavy doses of narcotic pain medication are not good candidates for this herbal product since a further increase of myalgia may not be tolerated. Everyone has "bad" pain but the patients not needing much pain medications are better candidates for this herbal supplement. Again, the dose needs to be titrated. Side effects, though usually temporary are not uncommon. They can be ameliorated by slowly increasing the dose.

Side Effects Increase in symptoms, such as headache, myalgia, arthralgia, stomach complaints or bladder discomfort, can be seen in over 50% of the patients, lasting from a few days to few weeks, but could be relatively mild if the dose is increased slowly. You'll generally know if the preparation works in from one to three months. Longer courses may be necessary if the patient is tolerating the drug well. Expect to be taking the drug for a year (at least) if it works.

Prognosis – On the average, the patient should have some signs of improvement by 4-6 weeks, but few may take more than 3 month, especially if the dose is escalated over 4- 6 weeks period. Since the symptoms are often cyclical, a longer course may be needed to fully evaluate the benefit of the herb, as long as the patients are tolerating it well. With significant responses, patients should not perform vigorous exercise in the first few months to avoid major relapse of symptoms. Most of the patients will need to take the herbs for more than one year, if there is significant response.

Patients with symptom flares can be on it long-term without side effects. Maintenance doses are possible.

Patients with periodic exacerbations of symptoms while taking the herbs will not likely tolerate reduction of the dose after one year. If there is no response, equilibrant should be taper off in about two weeks instead of abrupt discontinuation. We have at least 30 patients taking the herbs beyond 2/12 years and are still doing well without any side-effects. Andrew is doing well on a maintainence dose of equilibrant, and will be starting pharmacy school in two days. Fifty percent of patients have experienced improvement – some dramatic. Relatively long-term use of the herbs is required to prevent relapse in many patients.

Results. We have given the herb to more than 350 patients over the last 2 1/2 years, and the overall improvement is about 52%. Some patients who lied down most the time went back to work in a few months (great responders), others would have at least enough improvement to do more in a day (partial responders). Relapses are common if patient stopped the herb in 3-6 months after significant improvement (2 out of 3 people). Few patients went in complete remission after taking the herbs for only 3 months, but none of these patients were females.

Patients with autoimmune manifestations or seizures should not take these herbs.
Warning: This type of immune modulators should not be used in patients with autoimmune tendency or known seizure disorders. It is best that a physician supervises the patient on any herbal product and blood tests can be done in 2-3 months after starting the herbal product.

NOTE: ***Oxymatrine is from the *Sophora plant in China, part of the pea family (or Equilibrant which contains oxymatrine and a number of immune modulators). Like the anti-viral Valtrex, it may have been too late to help my advanced ME/cfs. Instead they added to medication overload, elimination and withdrawal. Sophora exhibits many pharmacological characteristics including anti-pathogen, anti-inflammation, anti-hepatitis B virus infection and immune regulation (Fei et al., 2015). See podcast on enteroviruses (2022): Dr. John Chia talks more about chronic enterovirus infection. I was told that this infectious disease specialist laboratory tested Lomatium on behalf of an ME/cfs patient in Summer 2019. He found that it killed all pathogens.***

IV. PROPHETIC VIRAL JOURNEY: Past, Present and Future

A microbiologist at New York University, Elodie Ghedin, in *The Next Human* (National Geographic April 2017, page 54) was prophetic about viruses:

"I don't know why people aren't more scared…the example of AIDS, which has killed 35 million people worldwide, a death toll roughy equal to that of the 1918 pandemic. It turns out that a small percentage of people - no more than 1 percent - have a mutation of the gene that alters the behavior of a cellular protein that HIV, the virus that causes AIDS, must latch on to, making it nearly impossible for them to become infected. If you live in New York City's Greenwich Village, with access to the best antiviral drugs, this may not decide if you live or die. But if you are HIV positive in rural Africa, it might very well."

Some early scientific responses included tinkering with non human genes, for better or worse: "A colleague of Church's, Kevin Esvelt at the MIT Media Lab, is working to alter the mouse genome so the animal can no longer host the bacterium that causes Lyme disease. A third researcher, Anthony James of the University of California, Irvine, has inserted genes in the *Anopheles* mosquito that prevent it from carrying the malaria parasite." (National Geographic, April 2017, page 58)

Two brilliant discoveries, the microscope and bacteria, from another era (1676) give us perspective today: https://www.aaas.org/discovery-bacteria: "In the year 1900 the prevailing three causes of death were influenza/pneumonia, tuberculosis and gastroenteritis, whereas in the year 2000 the prevailing causes of death were heart disease, cancer and stroke. This represents a strikingly different etiology of deaths and it will be interesting to see how these trends continue to change." Aria Nouri, MD. Per Traditional Chinese Medicine, if we do not prevent or remove viruses/ pathogens they will continue to cause mystery illnesses and death, in humans, animals and even plants.

I still prefer Traditional Chinese Medicine and Lomatium to most modern protocols because they have been field tested for 5,000 and 15,000 years, respectively. There is a theory that spontaneous healing happens after a body's 37 trillion stem cells align. I believe this process started for me during weekly acupuncture in the bleak Pacific North West, Winter 2018. However, the viruses were still everywhere in my system. True healing only started after six months of removing lifelong pathogens via daily

Lomatium in the Arizona desert, Summer 2019. Packing Lomatium, Xylitol, Stem Cell Patches, I retired early and affordably to a small beach front home in Mexico, December 2020.

Essentially, ME/cfs necessitated four years of alternative and expensive healing protocols after four years of free Affordable Heath Care, including over-medication. Had I known that there were proven alternatives, I would have tried them at the onset of ME/cfs. In spite of extreme exhaustion and pain, I did try every western medicine recommended by multiple doctors and specialists in Washington and Arizona, as required by Social Security Disability Insurance (SSDI) courts.

NOTE: ***The judge is critical to SSDI awards: it is said that a good lawyer knows the law, but a great lawyer knows the judge. I had only a 5 percent chance of success with a Washington judge versus a 70 percent chance with an Arizona judge. A day before America's January 6, 2021 Capitol riots, I endured a COVID style "court appearance" via phone. The judge, lawyer and witnesses (SSDI work specialist and doctors) could not see that I was curled up on the floor, shivering under a blanket. That year I finally received a lump sum of SSDI back payments (minus 25% legal fees in Washington and Arizona) dating from 2014: the year I first became disabled and unable to work. P.S. A cottage industry of lawyers has blossomed in America around the denial of benefits to ME/cfs patients: seek referrals and references for the best disability lawyers and judges as soon as you have a diagnosis because there are time limits on SSDI qualification.***

V. ELEVENTH HOUR CURE: Lomatium + 4 Chinese Medical Practitioners

This is what began my 2019-2020 viral healing process: I started Lomatium, a powerful Native remedy in July 2019 under the supervision of my acupuncturist below and with the knowledge of my Arizona General Practitioner. Within three months, an off the charts reactivated Epstein Barr Virus that had me homebound and bedridden for six years, was normal, and within six months it was zero, with anti-bodies. Lomatium has been laboratory tested by an infectious disease specialist, in 2019. It kills all pathogens so it may be worth trying before, during and after future pandemics. Minority groups seem to be most vulnerable and long haul COVID (essentially ME/cfs), may follow. Lomatium comes from the Nevada-California Washoe Nation, via the Pacific North West originally, and was effective during the virulent Spanish flu of 1918. You may experience a week long rash and/or an emotional die off response. If you take Lomatium forever, test your liver and kidneys regularly as it is a powerful anti-viral.

FOUR CHINESE MEDICAL PRACTITIONERS
"Acupuncture journey to America: a turning point in 1971" New York Times (1995): "Though acupuncture had been practiced in North America ever since the first immigrants came to the continent from China, it rarely entered the mainstream before the early 1970s. 'Nothing in the new look of China has surprised or fascinated the American people more than the picture of Chinese doctors using modern Western medical methods alongside ancient acupuncture,' and 'I thought that China's wonders might surpass even the silks and spices of Marco Polo." Journal of Traditional Chinese Medical Sciences (2014) 1, 81e83: https://www.sciencedirect.com/science/article/pii/S2095754815000034

i. My Washington based Traditional Chinese Medical (TCM) practitioner has successfully used Chinese herbs to treat COVID-19: "I am using Chinese herbs for COVID patients very successfully. Anybody who has COVID and needs help can contact me and I can see them online and send them herbs." Daniel L. Altschuler, EAMP (LAc), PhD Acupuncture and Herbalist Seattle, Washington: www.oldschoolacupuncture.com marikpahealing@gmail.com #206-388-8557.

ii. Karin Nelson at BECALM Acupuncture and Massage since 2017 (20 minutes from Seattle by ferry): karin@becalmvashon.com #(206) 463-0900: https://www.vashonbeachcomber.com/news/new-apuncture-massage-practice-opens-in-town/

iii. For Arizona Acupuncture and Lomatium Kathy Fisher, Oriental Medical Doctor (OMD) Cottonwood AZ 86326 #928-963-1033. She is also on Facebook: Acupuncture & Chinese Medicine by Kathy Fisher, OMD.

iv. Dr. Keown, a British Acupuncturist and Emergency Room doctor wrote an excellent introduction for both doctors and patients: *The Spark in The Machine: How the Science of Acupuncture Explains the Mysteries of Western Medicine.* "I am a licensed acupuncturist. When we look at acupuncture from the perspective of fascia and embryology we can connect acupuncture to allopathic (Western) medicine with compelling logic and scientific elegance. This book is simply brilliant. Moreover, the writing is accessible to anyone with a genuine interest in the material. The more you know about anatomy and physiology, the more you'll get out of it, but anyone can get the general drift of the basic ideas. I suspect the second half of the book may be more for the acupuncturists because you need some familiarity with Traditional Chinese Medicine (TCM) to fully appreciate all the various mysteries that are being addressed here. You will come away with new-found respect for the wisdom of TCM and you will approach your patients with greater confidence. The biggest mystery remaining now is how TCM managed to get so much so right at the level of cellular communication pathways and the homeostatic regulation of hormones and neurotransmitters. The language of TCM may be shrouded in a simplistic vocabulary ("the body abhors wind"), but the sophistication of the underlying ideas becomes more and more apparent as medical science discovers more about stem cells and the importance of fascia and all the remarkable ways the body manages to maintain its balance." (Book Review)

Chinese medicine is more fully explained in Keown's latest book: *The Uncharted Body: A New Textbook of Medicine: "*There is a hidden and invisible world inside our bodies, which runs on energy. Within our every cell lives mitochondria, power generators with an electric current strong enough to create a spark of molecular energy. The mitochondria 'donate' these power molecules to each of our cells, which in turn use them to generate further electricity to drive their machinery. The electricity doesn't stop there. It organises and powers the brain and heart. It moves

our muscles and bowels and pulses within each nerve. It lies delicately balanced across the membranes of the liver, spleen, and kidney, lubricating their functions and driving their mechanisms. It moves in channels in the body and concentrates in nodes. Electricity is the energy of our lives. When it goes wrong it can cause chaos, catastrophe, and even death. It can rebel, or lie silent and stagnant. It can drive cells mad and turn them cancerous, make organs malfunction, or make us cry out in pain. Trying to make sense of the human body without understanding this primal energy, and the huge intelligence that drives it, would be like looking inside an unplugged computer and believing you can decipher it. The Uncharted Body will open that Universe to you showing you how to read it, understand it, and correct it; bringing the world of Chinese medicine into the 21st century. It is the body re-described and re-charted from the bottom up, through a world of energy rather than a mechanistic description of parts; and a window into the mysterious world of qi (pronounced 'chi') that has governed acupuncture practice for millenia. This book will radically transform your view of the human body. It is, in short, a new textbook of medicine." (Book Review)

XUE-FU-ZHU-YU-TANG:
a doctor asked me skeptically
how my life had shifted
in less than 2 weeks of chinese herbs?
i said for the first time
in two summers
i wore a dress reserved for swim days only
because the hem had come undone
but i had not been able to thread a needle, let alone
pick it up or hold steady to thread that minute hole
or sew a black hem with black thread in poor light, with weak eyes.
yet i did it as if riding a bicycle
after years of not riding
and then, too, instead of shuffling between my bed, a car, a couch and sitting motionless, pain-free as possible
for (dream) therapy
because doctors demand something of the sort,
i got out at the beach, walked gently and then stooped
to my amazement,
over and over again,

looking for the perfect shell and pebble,
risking the few steps to the sand -
still not blue-purple or breathless.
just as i had earlier sped up a flight of daunting stairs
with a parcel
not wanting to take it on my travels.
i am still in bed daily
because 4 years of illness does not evaporate overnight,
but i want to bathe in chinese herbs,
drink them in through every pore, orifice.
the furnace viral heat, and fierce battle against it,
against doctors, endless disbelieving doctors who almost killed me,
is ebbing from my body as suddenly as it came
- now i must see how much of me is left to heal: Deep Bows.

I shared this good news with my lead island doctor in October, 2017 and her response was to drug test me. A specialist off island had asked me: "Do you even want to live?" I fired all of them and the first SSDI lawyer who sat silent in court. In early 2018 I was going downhill rapidly again. These words from my first Chinese Medical Practitioner still resonated: "If you lived in Seattle I would treat you with weekly acupuncture." Delirious, I also heard whispers in French: "Calme toi, je suis ici." Being too weak to commute off island, I googled acupuncture and a new business popped up: BECALM (Calme Toi). An island acupuncturist was now just 5 minutes away from my condominium. Her hands, needles and hour long treatments worked on me weekly for 1.5 years. If I could have tolerated more herbs, like the one described in the poem, healing may have been quicker and complete. However, "chi" started after only six weeks. Dancing daily with a deep bass head set triggered my brain and body to work together again, after being homebound and bedridden.

NOTE: ***Budget at least USD $5,000 per year as most insurances do not pay for alternative medicine like weekly acupuncture. Some insurances may cover at least 12 sessions and/or physical therapy which is needed after years of no activity. Lomatium and stem cell patches are often more affordable and accessible than Chinese herbs and acupuncture depending on how advanced your ME/cfs/long Covid. They can both be shipped and easily used while Home Alone. P.S. Stone Age Acupuncture/tattoos (Otzi the Iceman): https://www.dailymotion.com/video/x1r9l8x and https://www.sciencedirect.com/topics/medicine-and-dentistry/acupuncture-analgesia***

VI. HERBAL CATALOG 2024: LOMATIUM

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https://drive.google.com/file/d/1erKKHu4116s8EyWwjBrLdOHTaXkeP2Te/view

"Ultimate Lomatium Starter Bundle
(LiverLove, MunityBoost, LDM-100)
Perfect for someone who needs to avoid the one time detox at all costs.
This is the perfect place to get introduced to the powers of Lomatium while preventing the one time detox rash. See page 16 of our catalog for exact dosing directions. You can download a copy right here.
Lomatium Starter Bundle
(MunityBoost and LDM-100 2oz or 4oz size)
Starting with a bottle of MunityBoost is perfect for most people who've never used Lomatium and are ready to experience the benefits of herbal healing at its finest.
MunityBoost all by itself is a wonderful healing tincture to have in your home.
Viral protection, liver support, clearing mucous from the organs and more.
This beautiful blend of Lomatium, Dandelion root, Red root, Black Walnut hulls, Sarsaparilla, Blue Vervain and St. John's wort has become a household favorite.

The following section was written many years ago by our dad, Dr. Max Barlow:
"On the eastern slopes of the Sierra-Nevada Mountains grows a very important plant in the Parsley Family. The western Indians have long used this plant to prevent and treat many ailments.

Botanically called Lomatium dissectum, because of its long, slender, hollow stem and its oil producing linear glands in the ripening seeds. The Indians called the medicinal root of this plant "the Dortza", meaning – "heap powerful medicine." The Washoe Indians collected the root in September and October when the richest supply of oils was concentrated in the large underground root. At least five or six gums, oils and oleoresins are present in the very aromatic root. After collecting the root, they sliced it longitudinally, exposing the volatile oils to the oxidizing (polymerization) effects of the air, which converts the oils to a stabilized resin. The cured root would then be hung to dry from the ceiling of their hogan until it was needed.

During the flu pandemic of 1917-1918, the root came into extensive use by the two Washoe Indian tribes near Carson City, Nevada. Dr. E.T. Krebs Sr., the contract physician who was assigned by the U.S. government to the Washoe Indians, was dumbfounded to find that these two groups of Indians were free from respiratory illness and that no deaths had been attributed to the influenza "bug." This was especially amazing because both Indians and white people were "dying like flies" throughout the entire region, the nation and the world. Spotting the dried root hanging from their hogans, Dr. Krebs asked what it was and what its use was. He was told it was "heap powerful medicine," and that it was used to prevent colds and the flu. He asked if he could try this medicine on some of his white patients and, after making a crude preparation and giving it to his non-Indian patients in San Francisco, he said, "They just stopped dying."

How it works: Scientific investigation of the plant reveals that the volatile oil factions in the root contain the antiviral/antibiotic ingredient. Also present are powerful anti-bacterial/anti-fungal properties. The Lomatium dissectum extract has a viro-static effect, meaning that it stops the growth of all viruses, bacteria and fungus in the body and eliminates the lethal micro-organisms without harming the ones necessary to good health. The effectiveness of Lomatium dissectum in eliminating infections and restoring health is an incredible gift from Mother Nature.

Extensive work has been done by over five universities on Lomatium dissectum. It is a powerful, nontoxic, viro-static against flu viruses, the trachoma virus, the Lansing Polio viruses, and numerous other viruses. By 1944, the Journal of Bacteriology reported, "The anti-biotic activity of oil factions separated from the root of Lomatium dissectum was determined on 62 strains and species of bacteria, molds and fungi. The heat-stable active agent was bactericidal for gram-positive bacteria at 10-4 dilutions and at 10-3 for gram-negative bacteria." (Journal of Bacteriology, Vol. 55 No. 5 May 1948)

About the time this report was published, 'miracle' sulfa drugs began to be widely promoted. In the interest of being 'modern,' no one wanted to use an old Indian remedy. With renewed interest in some natural remedies, Dr. Krebs Jr. passed on the extracting techniques developed by his father to Dr. Max Barlow. The extract is made today in an alcohol-based tincture known as LDM-100. Since LDM-100 is anti-viral, the dosage depends upon the strength (or weakness) of the body's natural immune system. LDM-100 is completely natural and non-toxic; therefore, the

dosage may be safely increased until it takes effect.

As the above quote from the Journal of Bacteriology indicates, Lomatium dissectum is also effective against molds and fungi. Thus, many Barlow Herbal users are seeing great results in fighting Candida albicans with our extract (when taken orally). LDM-100 will clear up most yeast infections. A drop between the toes will eradicate athlete's foot.

LDM-100 may be taken as a preventative against viral infections or solely during high-risk periods. This wonder drug of nature inhibits growth and reproduction of viral organisms, rendering them inactive, thus enabling white blood cells to do their job.

It should be noted that some people may experience a one-time detox rash from an oil faction found in Lomatium dissectum; as is possible from contact with any plant. The rash ranges from mild to full body and can be extremely itchy and uncomfortable. Such a reaction can be quickly overcome by taking Dandelion Root, Vitamin C, and Pantothenic Acid. Two days of only fresh juices has been found to speed up the detox process. The addition of fresh squeezed wheat grass juice is also extremely helpful. One can discontinue use of LDM-100 temporarily.

Adults: 3 to 10 drops, 3 to 5 times daily, or more. It is suggested to begin with a low dosage and frequency and gradually increase. Keep dosage low for the first 7 days and then increase as needed. Children: 3 to 4 drops, 4 to 6 times daily. It is also recommended to gradually increase quantity and frequency. 1 to 2 drops for babies added to water or juice." -Dr. Max Barlow

Jane here. My dad has been gone for over 22 years now and I feel that while much of the information about Lomatium has stayed the same - there have been some interesting things I've learned and come to believe about Lomatium and it's effect on the human body. I've talked to other herbalists who are very familiar with Lomatium and have used a fresh root extract of it and have never seen the detox rash. It appears that part of the power comes from curing and oxidizing the Lomatium root after it's been wildcrafted. Letting all of the oils cure and dry before putting the roots into the extraction process, in my opinion - changes the medicinal properties of Lomatium. Lomatium is a broad spectrum anti-microbial and I've seen it handle viral, fungal, yeast and some types of bad bacterial issues. I've come

to believe that Lomatium's special gift to humans is its anti-viral properties. I wouldn't want to live my life without it and it's been a true game changer when it comes to taking care of my kids and now my grand-kids. My biggest hope for you is using this information to help you stay healthy and well. Please know that I am not a doctor and anything I share with you is not meant to be medical advice.

Lomatium Dissectum Detox Rash Information

If you are new to the plant Lomatium, please read this information all the way through. Lomatium can cause a one-time detox rash in some people when taking it for the first time. It is not a dangerous or contagious rash, but it can be a scary, uncomfortable and a very emotional detox.

Start with a very small dosage when taking a Lomatium product for the first time. A very small dosage of the liquid Lomatium (LDM-100) would be 5-10 drops in water once a day for the first week for adults. You can even start with 1-5 drops once a day for the first week. In capsule form (SEES-Plus) one capsule once a day for the first week is considered a small dosage. It is easier to start with a smaller dosage when Lomatium is in liquid form (LDM-100 or MunityBoost).

Most little kids and teenagers do not get the rash. If they do, it is typically much less intense and clears out very quickly. A small, starting dose for a child would be 1-3 drops once a day for the first week. If no rash, then increase and use accordingly.

LDM-100 preceded by MunityBoost is very effective for all kinds of viral, fungal, yeast and some types of bacterial infections. Although there is much less chance of it, MunityBoost can cause the detox rash just like straight LDM-100 can. MunityBoost is 25% LDM-100.

What we've come to believe is that a viral or fungal load has been "stuck" in the tissues and Lomatium gives your body the opportunity to push out through your skin (your largest organ). We've seen many people on a Lomatium protocol completely eradicate long standing, systemic viral and fungal issues. Even ones that lay dormant for long periods of time.

If someone is going to get this detox reaction, then it will happen with a small amount or a large amount. It will only happen once for most people who get the rash. Over the years we have had a small handful of people get a light rash a second

time but only those who waited a long time between taking it for the first time and then taking it again. Usually a year or more. Please remember that it's not dangerous or contagious. Just extremely uncomfortable and itchy.

It usually proceeds like this: The rash will typically show up between 5-7 days after taking Lomatium. It looks like measles at first and then will progressively get worse before it starts to get better. It can show up anywhere on the body and then spread. If someone has had chronic UTI's then the rash usually shows up on the lower torso near the kidneys. If someone has had chronic chest/lung infections, then the rash usually shows up on the chest first before it spreads to the rest of the body. Sometimes it shows up randomly on a certain body part. There can be swelling, fever and purple looking welts. The extremities are usually the last parts of the body to get the rash. Legs and arms. It is also normal for ears, nose and face to swell a little. Some people get a light rash that covers only small parts of the body and is gone in 2-3 days. Most people get the full deal. And it usually goes solid and looks like a sunburn.

A couple of guidelines: You can lower the dose and keep going or you can stop taking it until the rash is gone and runs its course or some people prefer to stop until the rash is gone simply because it makes them feel better to stop what caused the rash in the first place. It won't make the rash go away quicker if you stop but it's up to everyone individually.

It is very important to stay hydrated with lots of water. This will give your body a chance to truly flush the toxins out. Lots of fresh, green juicing also helps to nourish you through this detox quickly. Stay away from fried food, junk food, processed food, soda, milk and dairy and most meat while your body is detoxing. Your body works very hard to digest, process and eliminate food and if you take a break from eating all together (fresh juice only) for 2-3 days – the rash will clear up much quicker. Even if you eat clean, taking a break from food will be extremely beneficial. If you simply can't juice fast, then eat as clean as you can. Everyone knows what that means.

There are some supplements we've found to help the rash clear up a little quicker. Number one is Dandelion root. You can get it in liquid form, capsule form or tea. Dandelion root is a very well-known liver support and detox. When the liver is supported the body is better able to handle the powerful viral/fungal detox of

Lomatium. Look at our LiverLove product. It is a specific blend for detoxing and supporting the liver and gallbladder. Consider going through a full bottle of LiverLove prior to starting Lomatium. If you already have the rash, then it will help you to take some form of Dandelion root during the rash.

We also suggest high dose Vitamin C. 5000 mg per day for an adult. Activated Charcoal is also a helpful detox tool and will help your body process the detox without your skin having to take it all.

The Lomatium rash usually gets extremely itchy to the point of being unable to sleep for a night or two. Taking an Epsom salt bath once or twice a day is very beneficial and can soothe and nourish the skin while the rash is running its course. Some people get up in the middle of the night to take an Epsom salt bath as well. Use Coconut Oil or Emu oil to smooth on the skin to relieve the itching.

Some people will feel an increase in energy while the rash is doing its thing and some people feel quite the opposite and feel extremely fatigued. The rash is not contagious so if you feel good then just carry on as usual. For some people this detox rash is an intense, emotional experience. This is a healing crisis. Sometimes you must get worse before you can get better. If you are tired, then rest as much as you can to let your body heal. There is no doubt this rash is miserable to go through, but your body is doing a smart thing.

A couple of wonderful things to know about Lomatium.
1) Your body doesn't appear to build an immunity to the plant Lomatium. So, you can take it for long periods of time while your body is healing from long standing systemic, viral/fungal/yeast issues. It is common for many people to take a preventative dose every day during cold and flu season or when they travel. Especially when getting on an airplane. A solid preventative dose for an adult is 1/2 dropperful (approx. 25 drops) once or twice a day.
2) You can safely increase the dosage until it does the job. Due to our extensive, lifelong use of Lomatium we have used LDM-100 (25-50 drops each time) every hour on the hour to clear up UTI's, ear infections, cold, flu and other acute infections.

Here are some of the issues I've used it for during my more than 40 years experience with Lomatium.

1) on Warts and toe/fingernail Fungus (topically and internally)
2) to Knock down cold sores caused by the Herpes virus
3) to clear up a tooth abscess
4) to gargle with before swallowing to keep mouth bacteria-free
5) for UTI's (Urinary tract infections)
6) for Ear infections (taken internally and a drop or two directly in the ear)
7) for Strep infections
8) for the Common Cold, Flu, Congestion, runny nose, etc…
9) for Asthma
10) for Bacterial infections
11) for Respiratory tract infections
12) for Tonsillitis (early stages)
13) for Bronchitis
14) for Vaginal infections (douche and internally)
15) for Candidas
16) for Chronic fatigue syndrome
17) for Skin infections (topical in the form of Golden Salve or extract)
18) for Hay fever
19) for EBV (Epstein-Barr virus)
20) for Mononucleosis
21) for HPV (Human Papillomavirus)

As you can see, the pure root extract of Lomatium dissectum has amazing medicinal properties. So… whether you've been using LDM-100 for many years or you're just starting to use it, broaden your horizons in your applications and watch the wonderful results! LDM-100 can be taken straight or diluted in a small amount of water or juice."

NOTE: ***The most exciting medical information I received (aside from an immediate latent pathogen diagnosis by my Seattle Chinese Medical Practitioner), came on day one from my Arizona Chinese Medical Practitioner. She had something more powerful than weekly acupuncture for reactivated viruses, namely a Native anti-viral called Lomatium. I never had a one-time rash from Lomatium tinctures or salves, but I did have an immediate emotional die off response in Summer 2019. It left me feeling lighter in body and spirit because it was the first time that I could feel lifelong pathogens being eliminated. I finally did "catch" COVID-19 in June 2022 while tutoring a neighbor's three grandsons in Mexico. It lasted 10 days. After 15 days a blood test revealed that I had anti-bodies which means that Lomatium worked to contain and remove that virus as it did with the Epstein Barr Virus (both easy to measure with blood tests). I have avoided COVID-19 and other vaccines because I realized, during my Vashon Island WA USA self imposed isolation, that even winter flu vaccines made me sicker. With my genetic mutations (MTHFR) I still get sick when I travel or mingle in crowds. Both are much higher risks for those with certain mutations and intolerances so pandemic precautions may apply. This has not stopped me from living fully, however, because I take the powerful Native anti-viral Lomatium daily and can safely increase the dose as needed. A trip to the congested and polluted, (yet magnificent), Mexico City over Christmas 2023 had me writing HOME ALONE 2020 in bed.***

VII. STEM CELL PATCH phototherapy X39

David Schmidt is the inventor of LifeWave technology, founder and CEO of LifeWave

David's experience in business and product development spans over 30 years and includes a formal education in Management Information Systems and Biology at Pace University in Pleasantville, NY. David then went on to pursue several entrepreneurial endeavors and, as a result, owned successful companies involved in manufacturing and product development. One of these companies, Advanced Applications Group, is a research and development center that specialized in energy-production technologies for both military and commercial applications. During his time with AAG, David developed new methods for producing hydrogen and oxygen, designed and prototyped multi-fueled, bladeless-turbine power generation systems, and constructed metal-combustion rocket engines.

As a result of his innovations, David was presented with an honorary doctorate by Dr. Alexander Marinaccio of the International Hall of Fame of Inventors. In addition, as a result of work performed in the design of emergency oxygen systems for General Dynamics and the U.S. Navy, David was invited to participate in the Navy's next generation mini-sub program.

The LifeWave Technology was born out of three years of intense research by David into the concept of being able to naturally increase energy and stamina through elevation of fat burning, utilizing wireless communication to the human body via phototherapy.

Globally, David is the holder of 94 issued patents, with many more being written. More than seventy of those issued patents are in the field of regenerative science and technology. One of his inventions, the Double Helix Conductor, produces a novel blend of electromagnetic and non-electromagnetic fields to improve the speed of wound healing that rivals that of stem-cell injections. This led to David realizing that phototherapy can be a means by which a person's own stem cells can be activated into a more youthful state as opposed to requiring an injection of expensive and potentially dangerous stem cells. Hence, after ten years of study, the X39® patch was born.

NOTE: ***I have been using a variety of these patches since Summer 2020 when I first tried X39 and felt like running at high noon, in Arizona's desert heat. If you take the patch off, the signal stops immediately. It is essential to hydrate and alternate days on and off patches. Triggered by your own body heat and light, they remind me of portable acupuncture. A 30 day refund policy makes it possible to experiment, but X39 is the stem cell patch. They can be ordered online and shipped many places in the world:*** ***customerservice@lifewave.com***

VIII. XYLITOL: No-More-Allergies-Asthma-or-Sinus-Infections (pdf) by Dr. Lon Jones

THE NASAL CONNECTION (*excerpts from Chapter Two, The Discovery, page 30-32)* Keeping the nose clean with xylitol is important because essentially all respiratory problems have their beginning there. The back of the nose is connected to the middle ear by the Eustachian canal, the sinuses by the osteomeatal complex, and even to the eyes by the tear ducts. The nose is a nidus, a nest from which bacteria and viruses spread to other parts of the body. Allergens are first sensed there, and the bacteria and viruses that cause ear and sinus infections first attach there, and even the common cold and the flu come from viruses and bacteria that begin their journey in the back of the nose. All of these connected areas can get irritated by allergens or infected by viruses or bacteria that live in the back of the nose. Honoring and supporting our nasal defenses in their attempts to wash out these irritants means that these problems will cease. In the following we will show what our defenses are, how they are hobbled, and how we can help them work better. And making them work better can keep us free of upper respiratory problems, infections included.

After the FDA suggested that xylitol would be better classified as a drug because of its ability to stop ear and sinus infections and help with allergies and asthma, I began talking to drug companies to see if there was any interest in them jumping through regulatory hoops and marketing this spray. Initially there was, but it evaporated when they learned that the active ingredient, xylitol, was generally available and could not be protected by patent. The patent I got was a 'use' patent, meaning that no one could market the nasal use of xylitol. Drug companies want a patent either on the active ingredient, the drug itself, or on the medical device that delivers it. There are also other ways of defining drugs, like if they are taken internally. This is the problem we share with oral rehydration; both have sufficient benefit to be classed as "drugs," but neither have the ability to reward the drug companies with sufficient profits to make that practical. Again: no patent—no profits; no profits—no research; no research—and no one knows about the benefits. There is no economical way that a common safe food substance can be a 'drug' so this spray is not regulated or approved by the FDA. It is not a drug; it is only a very neat way to wash your nose. If washing your hands is effective in reducing

communicable diseases, washing the nose is even more so because that is where so many of them enter the body.

Yet research done on nasally administered xylitol satisfies the most demanding standards: it acts locally and is not absorbed into the nasal tissues; that means that it winds up in our stomachs just like the xylitol we eat in berries or other fruits. In addressing the safety of this spray for the FDA I wrote: "Ten percent of the dry weight of a plum is xylitol. If a person were to use this spray every hour of the day, 24 hours a day, both sides of the nose, they would get the equivalent of half a plum's worth of xylitol." When I withdrew my application for consideration at the FDA they remarked on the impressive safety profile.

XYLITOL—THE BACK STORY

Technically xylitol is the sugar alcohol of xylose, which is wood sugar. But that is misleading because xylitol is neither a sugar, nor an alcohol. It looks like sugar and it tastes like sugar, but it has very little effect on a person's blood sugar and is metabolized in an entirely separate way from the other sugars we eat.

Xylose, wood sugar, is actually a very common sugar in the human body. It is one of the seven sugar complexes on our cell surfaces that are used by the cells to recognize one another. It is by means of these sugar complexes that our cells hold on to each other and know where to hold on. It is also these sugar complexes that bacteria attach to. Most of the sugars we use for energy are six carbon sugars like glucose and fructose, and some of them have unfamiliar names, like galactose, mannose, and fructose. Xylose and xylitol only have five carbons and xylitol also differs from the others in that it is flexible. In the body the six carbon sugars are generally fixed in their shape; they are in a ring form that can bind easily and regularly with other sugars to form chains of simple sugars, and they are stable enough that other cells and bacteria looking for something to hold on to can rely on them not to change. Xylose is also commonly in a ring formation, but xylitol is only open. This means that it is flexible; it can bend and twist and look like a lot of these other receptors; in other words, it can fill up the hands the bacteria use to hold on. I think this is significant to how xylitol works and will talk more about it later.

Another reason for it to work is suggested from the early dental studies; xylitol gives the bacteria indigestion—they eat it, but they can't digest it.

Was the same thing happening in the nose? I called Dr. Matti Uhari in Finland and told him of my experience. Dr. Uhari is one of the world's leading xylitol researchers; it was his study that showed what chewing xylitol-sweetened gum could do for preventing ear infections. He thought I should try to reproduce his studies with the chewing gum. That didn't make much sense because his study prevented only 42 percent of ear infections using gum that cost about a dollar a day; the spray prevented about 92 percent of infections at a cost of about 7 cents a day. I suggested that he reproduce mine, but he wasn't interested.

Dr. Uhari did tell me about a study his group had done that was due to be published. In this study they showed that xylitol blocked much of the bacteria's ability to hold on to the cells in our noses. We will also talk more about this study a little later, but it is a major part of this story because it shows that the action is not just bacterial indigestion.

NOTE: ***XYLITOL XLEAR MAX NASAL SPRAY comes with or without a natural anti-histamine, capsicum. I have been using it successfully since Winter 2020 for allergies and disease prevention. It can be found at health food stores or online.*** **Youtube video:** ***https://oralsystemiclink.net/health-care-providers/profile/dr-lon-jones-talks-about-the-huge-importance-of-using-xlear-nasal-spray-containing-xylitol. The most affordable daily option if you are on a tight health and/or travel budget: Xylitol (from plums/ berries) with natural anti-histamine Capsicum (from red peppers for allergies) to prevent disease; Lomatium (from the parsley family) to kill all pathogens. During an epidemic or pandemic they should be part of basic precautions, especially if you are on the front lines, exposed to crowds, or must travel. An environmental doctor shared a free version: gargle (throat) and snuffle (nasal) with a warm salt water solution which is a natural antibiotic. Water must be clean. P.S. For a deviated septum (80% of people have this), allergies, congestion and snoring also try (drug free) Breathe Right nasal strips and a personalized dental guard at night because sleep heals…***

IX. COULD GENETICS PLAY A ROLE IN THE SEVERITY OF COVID-19?

April 8, 2020 By 23andMe under 23andMe Research

Scientists around the world are racing to understand COVID-19 and the novel coronavirus that causes the disease. Among the questions they're asking: Why do most people who are infected show mild to moderate symptoms (or possibly no symptoms at all), whereas others develop severe disease?

We know that certain factors — like advanced age or underlying health conditions like heart disease and diabetes — can make someone more likely to develop severe symptoms, including pneumonia. But even young, healthy people can develop severe symptoms and die from COVID-19. Why might that be? Could genetics play a role?

With the help of our research participants, 23andMe is launching a research study to try to answer that question. Before we describe 23andMe's planned research, here's some of what is known about the role of genetics in other infectious diseases. Human genetics plays a role in many infectious diseases.

We know from past research that genetics can influence a person's susceptibility to different infectious diseases — including whether they're infected and how severe their disease becomes.

For example: Particular genetic variants in a gene called HBB can make people less susceptible to infection by the parasite that causes malaria. HBB contains instructions for making the hemoglobin protein that carries oxygen inside our red blood cells.

A particular genetic variant in a gene called CCR5 can protect people from HIV infection by preventing the virus from being able to enter certain T cells in our immune system. CCR5 codes for a protein that sits on the surface of those T cells.

People with a particular variant in the FUT2 gene are much less likely to be infected by norovirus. FUT2 codes for an enzyme that helps determine whether certain molecules are present on the surface of our gut cells. In addition, genetic variants in HLA genes may explain the differences in response to several different conditions. This group of genes helps the immune system distinguish the body's own proteins from proteins made by foreign invaders like viruses and bacteria. Studies have

found that variants in these genes may help explain why HIV progresses more quickly in some people than others. Variants in the HLA genes may also influence why some people can clear hepatitis B infection and others don't, instead ending up with a chronic disease. And variants in this same group of genes could offer insight into why some (but not all) people infected with dengue virus experience severe complications. In 2017, scientists at 23andMe published a genetic study that identified almost 60 genetic variants associated with susceptibility to one of 17 different infectious diseases, and many of those variants were in HLA genes.

What about COVID-19?
So, could genetics help explain why certain people develop severe COVID-19 and others develop only mild or undetectable symptoms? It's too early to say for sure, but some scientists think that's likely the case. At least a couple of studies have started looking for clues.

For example, in order to get inside our cells, the virus that causes COVID-19 latches onto a human protein called ACE2. And scientists identified genetic variants in and near the ACE2 gene that could impact how much ACE2 protein is made, or how the protein functions. This could make it easier or tougher for the virus to slip inside a person's cells and make them sick. In another study, scientists reported that a person's blood type — which is determined by the ABO gene — might influence their likelihood of being infected by the virus. While these preliminary observations are intriguing, more research in different populations and in larger groups of patients is needed to validate these and other findings.

Coronavirus is a general term that includes many different (but related) viruses, including the one causing the current pandemic.

SARS-CoV-2 is the specific coronavirus in the news right now. SARS-CoV-2 stands for severe acute respiratory syndrome coronavirus 2, based on the symptoms it can cause. (The 2002-2003 SARS epidemic was caused by a virus called SARS-CoV.) COVID-19 stands for coronavirus disease 2019 (the year the virus was first found in humans).

How 23andMe Research could make a difference 23andMe's unique research model, with millions of customers consented to participate, offers our scientists a powerful

tool for potential insight into the role genetics may play in explaining differences in the severity of the novel coronavirus.

One way to identify genetic variants that contribute to disease severity is a genome-wide association study or GWAS. In a GWAS, scientists compare the DNA of people who had severe symptoms to the DNA of people who had milder symptoms, or even no symptoms at all. Genetic variants that are more common in one of these groups of participants than the other represent genetic associations with COVID-19 severity.

And that's just one question that 23andMe Research hopes to answer. We'll compare genetic variants in people who get very sick with variants in people who had milder symptoms or haven't gotten sick. By identifying genetic variants that are more common in people who experienced severe disease, scientists may be able to better understand who's most at risk. Perhaps even more importantly, these genetic studies can also help us gain new insights into how the novel coronavirus infects our cells and impacts our bodies. And those insights might give us clues to potential targets for new drugs or vaccines.

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Tags: COVID-19, Featured, infectious disease, Malaria, norovirus

WHAT IS MTHFR A1298C GENE MUTATION?

By Australian Helen Janneson Bense

https://about.me/insightnaturopathy

A1298C single nucleotide polymorphism (SNP) affects the enzyme known as 5,10 MethyleneTetraHydroFolate Reductase (MTHFR). This polymorphism involves a down regulation of the MTHFR enzyme, responsible for the backwards reaction of the folate cycle, where 5-methylfolate (5MTHF) is converted into tetrahydrofolate (THF). This reaction is most important for the production of BH4 – tetrahydrobiopterin. Each turn of the folate cycle and conversion of 5MTHF to THF produces 1 molecule of BH4. In heterozygous and homozygous states, enzyme activity will be compromised by approximately 30% and 70% respectively.

FUNCTIONS OF BH4

Cofactor for all three isotypes of nitric oxide synthases (nNOS, eNOS, iNOS). NOS is essential for the conversion of arginine to Nitric Oxide (NO) and Citrulline in the Urea Cycle. 2 BH4 molecules are required to drive the Urea Cycle efficiently and produce Citrulline and NO. 1 BH4 molecule will result in the generation of peroxynitrite, and no BH4 results in superoxide formation. Detoxification of ammonia – BH4 is required to convert ammonia to urea in the Urea cycle. This is a priority function of BH4.

BH4 is the rate limiting factor in the production of neurotransmitters – Indolamines: Serotonin and Melatonin; and Catecholamines: Dopamine, Noradrenalin, Adrenalin. BH4 activates enzymes tyrosine hydroxylase and tryptophan hydroxylase in the synthesis of these monoamines. When BH4 is limited in supply these enzymes cannot bind to their amino acid substrates, tyrosine and tryptophan, which are the precursors for these monoamines. Cofactor for Phenylalanine hydroxylase in the conversion of Phenylalanine to tyrosine.

CONSEQUENCES OF LOW BH4

- **High levels of ammonia – exacerbated by CBS/NOS SNPs.**
- **High levels reactive oxygen species – superoxide. High levels of reactive nitrogen species – peroxynitrite. These dangerous free radicals trigger microglial**

activation, increased NMDA receptor stimulation, excessive glutamate production and eventually neuronal degeneration.

- **Low levels of all monoamines – depending on COMT/VDRtaq SNPs. COMT mutations can result in higher levels of circulating dopamine. A1298C mutation can mask a COMT mutation.**
- **Decreased production of glutathione, a major antioxidant required for removing heavy metals from the body.**
- **High Phenylalanine levels result in low serotonin and GABA.**
- **When BH4 supply is limited the body will prioritize detoxification of excess ammonia above production of neurotransmitters.**
- **Excessive production of excitotoxins – glutamate, quinolinic acid and arachidonic acid. Quinolinic acid is associated with higher incidence of seizures. Quinonlic acid is also associated with flu like symptoms such as achy muscles and increased sensitivity to light/sound. A result of viral inflammation, it stimulates NMDA receptors of glutamatergic neurons in the brains and is responsible for the excess production of glutamate. In the presence of mitochondrial dysfunction and subsequent low ATP, there will be an increase in conversion of glutamate to ammonia and alpha ketogluturate with a net loss of NADH. This places even more pressure on BH4 to remove ammonia.**

BIOMARKERS

- **Certain biomarkers can be seen on multiple tests that may give some information to the expression of this gene and severity. Below is a collection of my observations from evaluating numerous test results of those with MTHFR A1298C.**
- **Organic Acid Test - high cis aconitate, citrate and iso citrate all indicate high ammonia levels. High quinolinic acid levels and high Quinolinic acid/Kynurenate ratio indicate microglial activation.**
- **Plasma Amino Acid Test - high arginine and citrulline indicate high ammonia levels. High phenylalanine:tyrosine ratio indicates issues in conversion of phenylalanine to tyrosine. BH4 is needed as a cofactor for the enzyme phenylalanine hydroxylase required for this conversion.**
- **Blood - high RBC folate.**
- **Hair - high aluminium.**

ASSOCIATED CONDITIONS

- **Chronic Fatigue Syndrome/ME**
- **Fibromyalgia**
- **Multiple Chemical Sensitivity (MCS)**
- **Insomnia**
- **Depression**
- **Autism Spectrum Disorders**
- **Neuro-immune disorders**
- **Hypersensitivity reactions eg. red ears (due to mast cell degranulation and subsequent high histamine levels)**
- **Raynaud's**
- **Migraine**
- **Seizures**
- **Parkinson's disease**
- **IBS, IBD, peptic ulcers, increased susceptibility to parasitic infections, low gut butyrate**
- **Anxiety/Panic disorder**
- **Ammonia toxicity symptoms – brain fog, spacy, language issues, fatigue, poor concentration, dark circles under eyes, poor learning/memory, headaches, stimulating behaviours, food intolerances (especially protein).**

TREATMENT AIMS

- **Support Ammonia detoxification**
- **Antioxidant support to reduce peroxynitrite and superoxide**
- **Increase BH4 production**
- **Neurotransmitter Support**

CONSIDERATIONS FOR NUTRITIONAL BYPASSES

- **Ascorbic acid (Vitamin C) neutralizes Superoxide. Ribose, Inosine and NADH neutralize peroxynitrite.**
- **OPC's – oligomeric proanthocyanidins, Pycnogenol – anti-oxidants neutralize peroxynitrite and superoxide and regulate glutamate:GABA.**
- **Neutralizing free radical production will prevent ongoing microglial activation, NMDA receptor stimulation and subsequent excessive production of excitotoxins**

like glutamate. Clearing high levels of ammonia from the body will surely make the patient feel better relatively quickly, and will also remove some of the strain on BH4's role in clearing ammonia. The more BH4 is available for neurotransmitter production, the better the patient will feel in the long run.

- **Ammonia control – ammonia RNA, glutamine, NADH, weekly charcoal/mag citrate flushes, Yucca, arabinogalactans, sodium/potassium butyrate.**
- **NADH is a cofactor for DHPR, the enzyme responsible for conversion of BH2 to BH4. This enzyme is inhibited by Aluminium, Lead and A1298C. NADH along with vitamin C also recycle glutathione. NADH is best taken as a sublingual preparation first thing in the morning on an empty stomach.**
- **Neurotransmitter support – Serotonin support includes tryptophan, 5HTP, P5P and B3. Dopamine support includes vitamin D, tyrosine, ginkgo biloba and macuna puriens.**
- **GABA is also important to take to counter glutamate levels. I suggest a sublingual preparation. If you have either MAO A or COMT mutations then be careful when using tryptophan, 5HTP, ginkgo biloba and macuna puriens.**
- **BH4 support – BH4, 5MTHF, NADH, Royal Jelly, Lithium Orotate. Both lithium and 5MTHF will open up the long route of methylation. See more on this below. Always check lithium levels on hair tests before using.**
- **Methyl, adenosyl or hydroxycobalamin (depends on COMT/VDRtaq SNPs as to which B12 form will suit) to be introduced prior to 5MTHF supplementation to prevent methyl trapping.**
- **5MTHF (activated folic acid) neutralizes peroxynitrite and is a cofactor for BH4 production. 5MTHF will open up the long route of methylation and can bring upon a lot of detoxification symptoms if taken too early on in treatment. The whole methylation cycle must be looked at first, and a step by step process is essential before supplementation with 5MTHF is advised. It's best to start with gastrointestinal issues, infections and inflammation, ammonia/glutamate/free radical support, transsulfuration support, mitochondrial support, short route support (BHMT) and then move onto long route support with 5MTHF, B12 and lithium to open the long route of methylation. 5MTHF is a methyl donor and may suit everyone. It will depend on your methyl tolerance which can be determined by your COMT/VDRtaq SNPs.**

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NOTE: ***If you had COVID-19, or other mystery pathogens, start with a DNA ancestry or health analysis which will serve as your personal medical map. Run your raw data through a program like https://geneticgenie.org/ or https://www.foundmyfitness.com/genetics. Read: "Dirty Genes" by Dr. Ben Lynch or follow his Facebook page. As neuroendocrinology researcher and author Robert Sapolsky said:"Ask not what a gene does, ask in what context it does it." I chose 23&Me to test both health and ancestry. My maternal and paternal haplogroup is T2a1a and R-CTS241, respectively. I also have food intolerances and mutations such as methylenetetrahydrofolate reductase (MTHFR) that impact my fighting off viruses or other pathogens. Many western doctors doubt ME/cfs patients are physically sick. They think it is a mental illness. So proving your genetic vulnerability might be helpful in getting a quick and accurate diagnosis. Five key genes IFNAR2, TYK2, OAS1, DPP9 and CCR2 â€" are linked to severe COVID-19 https://www.aol.com/news/five-key-severe-covid-19-161436410-183029795.html? It took 1.5 years for doctors to do a full panel of pathogen blood tests. I had off the charts, reactivated EBV and was not a depressed hypochondriac or…lazy. After that I switched to Traditional Chinese Medicine master practitioners.***

X. ALTERNATIVE ANCIENT MEDICINES: 5,000 and 15,000 years old

"Then it flowed down the middle of the city's main street. On each side of the river are trees that grow a different kind of fruit each month of the year. The fruit gives life, and the leaves are used as medicine to heal the nations." Revelation 22.2

Lomatium, in the parsley family, has long been a medicinal amongst America's First Nations: "In 2008 Dennis Jenkins of the University of Oregon reported that he'd found human coprolites, the precise term for ancient excrement, dating to 14,000 to 15,000 years old in a series of shallow caves overlooking an ancient lake bed near the town of Paisley. DNA tests have identified the Paisley Caves coprolites as human, and Jenkins speculates that the people who left them might have made their way inland from the Pacific by the way of the Columbia or Klamath Rivers. What's more, Jenkins points to a clue in the coprolites: seeds of desert parsley, a tiny plant with an edible root hidden a foot underground. 'You have to know that root is down there, and you have to have a digging stick to get it', Jenkins says. 'That implies to me that these people didn't just arrive here.' In other words, whoever lived here wasn't just passing through; they knew this land and its resources intimately." (*First Americans,* National Geographic, January 2015, page 137).

***Wild Plants and Native Peoples of the Four Corners* by William W. Dunmire "Mesa Verde has a much higher diversity of plant life within a days reach of the mesa tops. Marilyn Colyer, natural resource manager for Mesa Verde, speculates that many more species of wild plants known to be dietary items for native peoples living in other places in the Southwest during historic times must also have been used by the Ancestral Pueblo's at Mesa Verde, even though their remains have yet to be detected in coprolites. Among such potential foods is the bulbous roots of biscuit-root (Lomatium spp)." (Page 27). *Plants of the Pacific Northwest Coast* by Pojar and MacKinnon: "This book is considered the bible of plant field guides for the Pacific Northwest, and covers Washington, Oregon, British Columbia and Alaska. It instructs about indigenous uses for the plant, which focus on the use of the seeds for colds, sore throats, tuberculosis. This region has 4 varieties."**

However, there are five total species of Lomatium per *Seed Plants of Northern Arizona* by WB McDougall. The one that kills pathogens is: "Lomatium dissectum (Fern-leaved desert-Parsley) same range as L. nudicaule plus extends up to middle elevations in the mountains. Lomatium only resembles Chimaja (an alternative name for Biscuit root, also from the Parsley family, Latin names: Aulospermum

purpureum S. Wats. Umbelliferae, Cymopterus fendleri). Per *Medicinal Plants of the Desert and Canyon West* by Michael Moore: "this is something similar in appearance, but *not* the same, so plant collectors beware."

Key to the lomatium dissectum var. multifidum (Nutt) Mathias & Constance:
" Plants mostly caulescent, with a stout caudex and thickened roots; stems 30-140 cm tall, puberulent to almost glabrous; leaf blades deltoid to orbicular in outline, ternate and then 2 to 4 times pinnate, the segments linear oblong, 2 to 20 mm long, puberulent beneath; petioles 5 to 25 cm long, broadly sheathing the base; cauline leaves few and smaller; umbel rays many 3 to 12 cm. long; involucel bracts few, linear, entire; pedicels 4 to 20 mm long; petals purple or yellow; fruit oblong to oval, 12 to 16 mm, long, glabrous, wings much narrower than the body, thick and corky, the oil tubes obscure. British Columbia south to Colorado, Arizona and California. Found in our area in southern Navajo and Coconino Counties at 4000 to 6000 feet. April to September."

NOTE: ***In summary, consider taking Chinese herbs or Lomatium to kill any pathogen, and acupuncture or modern stem cell patches to restore energy. Viruses retained in the body, whether latent or reactivated, will eventually cause mystery health problems in humans, animals or even plants. A mix of ancient and modern tips: Sunlight and dry heat control pathogens; Boil tap water or alkaline water can be delivered; World Health Organization recommends that homemade sugar-salt rehydration solutions should contain 8 level teaspoons of sugar and 1 level teaspoon of salt added to 1 liter of water. Vitamin D is actually a critical hormone, along with melatonin; Infrared light and heat trigger natural nitric oxide, a hormone. Dr. Teal's Melatonin Sleep Lotion, a dental night guard and Breath Right nasal strips for snoring, legal medicinal cannabis and "White Noise" help with lingering insomnia; Monthly B12 vitamin shots and Florastor probiotics as needed; AREDS 2 for vision also contain CoQ10 for heart health; Ancient Nutrition Multi Collagen Protein powder helps joints and mobility. A UTK Far Infrared Heating Pad provides pain relief at home: www.utktechnology.com An Oxygen Concentrator with prescription (or purchase) controls pre-diabetes, allergies and respiratory problems. Dr. Teitelbaum recommends Sucontral D/Hintonia Latiflora for Type 2 Diabetes (see Recommended Resources).***

XI. LONG COVID AND THE PATH FORWARD

Fauci warns about 'post-viral' syndrome after covid-19

by George Citroner on July 16, 2020 - Healthline

Experts are learning how COVID-19 may cause long-lasting symptoms.

- **As the pandemic continues, we're learning that many people who experience COVID-19 endure long-term health consequences called post-viral syndrome.**
- **Symptoms include fatigue and brain fog.**
- **The syndrome may be related to cytokines that cross the blood-brain barrier and affect the brain.**

All data and statistics are based on publicly available data at the time of publication. Some information may be out of date. Visit our coronavirus hub and follow our live updates page for the most recent information on the COVID-19 outbreak.
COVID-19 can bring severe illness that may take weeks to overcome. But even after surviving the initial infection, some people have symptoms that persist. Six months after the disease was first identified, experts are learning about its long-term effects. We now know that the disease can cause heart damage, neurological issues that include stroke, and lung damage.

Director of the National Institute of Allergy and Infectious Diseases and member of the White House Coronavirus Task Force, recently spoke on another, potentially debilitating, consequence of the infection: post-viral syndrome.

"Brain fog, fatigue, and difficulty in concentrating," Dr. Fauci said at the International AIDS Conference. "So this is something we really need to seriously look at because it very well might be a post-viral syndrome associated with COVID-19." What is post-viral syndrome following COVID-19? This condition is called myalgic encephalomyelitis (ME)-like illness. ME was previously called chronic fatigue syndrome (CFS).

"We see this with any virus, and it's basically unexplained, persistent, relapsing fatigue. It's most documented in women, twice as much as men," Dr. Donna Casey, internist at Texas Health Presbyterian Hospital Dallas told Healthline. "We can now see documented abnormalities in your nervous, immune, and metabolic systems. So we're seeing abnormalities in all three that creates myalgic encephalomyelitis."She added that it can affect people at all ages, but if you're older and have other health

issues, it can have a more lasting effect. Casey emphasized that people with post-viral syndrome do improve with time. "Of course, we're not at the six month mark for COVID, but my hospitalized patients, I'm seeing a lot of them once a week, and I can see them getting better."

Patients with preexisting conditions at greater risk

"I think, if you have diabetes and hypertension, you are more likely to have the cytokine storm which in turn means you're going to end up in the ICU on a ventilator," said Dr. Amir K. Ghiassi, pulmonologist with St. Joseph Hospital in Orange County, California.

"If your immune system isn't able to fight it but you still have some degree of health — I think it just becomes kind of a long battle." Ghiassi underscored that, "What we do know is the people who get it, it takes a long time for them to recover." He warned that COVID-19 isn't the regular flu "where you get it and recover, that's what we're trying to tell people." Also, a big question is whether this is because of the live virus or "because of the immune system reacting the way it does that causes symptoms." Ghiassi said if a patient is experiencing the same symptoms, it's likely they haven't defeated the virus yet, but, "If symptoms go away, then a new set of symptoms come on, that's a different story."

Treating post-viral syndrome

"Treatment is focused on reassurance, self-care, and symptomatic control," said Dr. Minh Nghi, internist at Texas Health Harris Methodist Hospital Southwest Fort Worth and Texas Health Physicians Group. "Sleep disturbances are addressed with sleep hygiene measures: turn off lights in bedroom at night, no TV in bed, try not to be very active in bed such as trying to read a tablet," specified Nghi. "Sometimes sleep medications or even low-dose antidepressants are used to help with sleep." He added that meditation and yoga might also be effective. Nghi affirmed that pain issues are addressed, but sometimes therapies such as cognitive behavioral therapy (CBT) and exercise can be used. "Acupuncture and massage have also been tried."

"One has to be careful due to a phenomenon called post-exertional malaise Trusted Source

(PEM)," he cautioned. "Which is a loss of stamina both mental and physical after exercise. So gradual exercise and monitoring is recommended."

He expressed frustration that there are currently no FDA-approved treatments specifically for this condition. It should be noted that, for people experiencing ME, the CDC currently advises "While vigorous aerobic exercise can be beneficial for

many chronic illnesses, patients with ME/CFS do not tolerate such exercise routines." The Centers also warn that "Standard exercise recommendations for healthy people can be harmful for patients with ME/CFS."

Symptoms may be related to inflammation

Dr. Robert Glatter, emergency physician, Lenox Hill Hospital in New York, explained that an accumulation of inflammatory cytokines Trusted Source in the central nervous system could lead to post-viral symptoms, especially when they cross the blood-brain barrier. "The result of pro-inflammatory cytokines crossing the blood-brain barrier in the hypothalamus," Glatter said. The hypothalamus is an area of the brain that helps regulate temperature, controls hormone release, and controls appetite among other functions. As a result of the cytokines crossing the blood-brain barrier, it can lead "to autonomic dysfunction such as high fevers, abnormalities of the sleep/wake cycle, cognitive abnormalities, and severe fatigue," said Glatter, "Which are characteristic of ME/CFS." He confirmed this is similar to what happened during the SARS outbreak in 2002-2003. A percentage of COVID-19 patients may go on to develop post-viral COVID-19 syndrome. "The truth is we don't know the long-term prognosis as well as the timeline for those with residual symptoms after initial infection with COVID-19," he concluded. "But the harsh reality is that we're learning that many patients who 'recover' after their initial infection continue to experience prolonged symptoms."

Coronavirus 'long-haulers'

Glatter pointed out a study Trusted Source revealing that 87 percent of patients who have recovered from COVID still have one persistent symptom. However, "We don't know all the reasons behind those who continue to have lingering symptoms such as fatigue, difficulty breathing, chest pain, and joint pain." He said one explanation for these symptoms, seen in patients with ME/CFS, suggests a possible defect in mitochondrial functioning, an important part of cells involved in energy production and regulation. "Another theory suggests a disturbance in the lymphatic system that drains a specific part of the brain known as the cribriform plate," said Glatter. "The defect involves special cells known as microglia that surround neurons or brain cells." He explained that this disturbance could cause an accumulation of pro-inflammatory compounds. "Long haulers, or those with lingering symptoms beyond two weeks, may be developing a condition

similar to those persons who have ME/CFS," said Glatter. "What's clear is that we need to devote considerable research to the study of the post-COVID viral syndrome. Ironically, COVID-19 is shining light on the often ignored patient population with ME/CFS."

The bottom line
As the pandemic continues, we're learning that many people who experience COVID-19 endure long-term health consequences called post-viral syndrome. Symptoms include fatigue, difficulty concentrating, and brain fog. There are no FDA-approved treatments for post-viral syndrome, but experts say patients with post-viral syndrome can get better with time.

NOTE: ***In Facebook support groups too, females seem to be more vulnerable to ME/cfs whether because of our genes, hormones and/or child bearing. At age 15, 35, 46 and upwards I was extremely vulnerable during puberty, pregnancy and menopausal hormonal changes. My mother and I had competing blood types (as did my son and I). These intense blood battles can end in "blue babies" or maternal death. At age 56 vulnerability came after 3 years of study and work in South Africa and the Middle East plus global migrant exposure. Doctors insisted throughout that my ME/cfs was in fact long term grief and depression after the death of my only 16 year old son (2010). That, and over medication, seemed easier for them than dealing with all my symptoms in chaotic 14 minute visits. Insomnia lingered longest for me: it started after childbirth in 1993 which reactivated my viruses for 5 years. P.S. Women may also experience Urinary Tract Infections and an overactive bladder: this very low dose estradiol (or estriol) treatment is considered safe, long term: https://www.urologytimes.com/view/dr-winter-highlights-the-benefits-of-vaginal-estrogen***

LONG COVID BLOOD TEST OFFERS FIRST CLUES INTO WHAT CAUSES THE MYSTERIOUS CONDITION by Erika Edwards, updated September 25, 2023

More than three years into the pandemic, the millions of people who have suffered from long Covid finally have scientific proof that their condition is real. Scientists have found clear differences in the blood of people with long Covid — a key first step in the development of a test to diagnose the illness.

The findings, published Monday in the journal Nature, also offer clues into what could be causing the elusive condition that has perplexed doctors worldwide and left millions with ongoing fatigue, trouble with memory and other debilitating symptoms. The research is among the first to prove that "long Covid is, in fact, a biological illness," said David Putrino, principal investigator of the new study and a professor of rehabilitation and human performance at the Icahn School of Medicine at Mount Sinai in New York. Dr. Marc Sala, co-director of the Northwestern Medicine Comprehensive Covid-19 Center in Chicago, called the findings "important." He was not involved with the new research. "This will need to be investigated with more research, but at least it's something because, quite frankly, right now we don't have any blood tests" either to diagnose long Covid or help doctors understand why it's occurring, he said.

Putrino and his colleagues compared blood samples of 268 people. Some had Covid but had fully recovered, some had never been infected, and the rest had ongoing symptoms of long Covid at least four months after their infection. Several differences in the blood of people with long Covid stood out from the other groups. The activity of immune system cells called T cells and B cells — which help fight off germs — was "irregular" in long Covid patients, Putrino said. One of the strongest findings, he said, was that long Covid patients tended to have significantly lower levels of a hormone called cortisol. A major function of the hormone is to make people feel alert and awake. Low cortisol could help explain why many people with long Covid experience profound fatigue, he said. "It was one of the findings that most definitively separated the folks with long Covid from the people without long Covid," Putrino said. The finding likely signals that the brain is having trouble regulating hormones. The research team plans to dig deeper into the role cortisol may play in long Covid in future studies. Meanwhile, doctors do not recommend

simply boosting a person's cortisol levels in an attempt to "fix" the problem. "There is no evidence that replacing cortisol in someone with long Covid would be a safe or effective thing to do," Sala said.

The study also found that dormant viruses, such as the one that causes mononucleosis, Epstein-Barr, come alive again in long Covid patients. It's unclear, however, whether those old viruses are causing symptoms or flagging a problem within the immune system. "We were looking for signals, and we found them," said Akiko Iwasaki, one of the researchers and a professor of immunobiology and molecular, cellular and developmental biology at the Yale School of Medicine. "Now what we need to do is home in on each of these signals and understand better how the disease has been driven by these signals." The investigators did not find significant evidence that long Covid is the result of an autoimmune disorder, in which the body attacks itself.

NOTE: ***An Australian friend on the importance of blood tests, DNA results, food intolerances: "When Francis Collins finished the Human Genome Project I thought it was marvellous from a human achievement point of view, but nothing more. I had no idea that it was going to change my life. But change it, it did and in all the right ways. When I heard about this from another genuine migraine sufferer I took a (University research) blood test and for the first time in thirty-three years I had a non-normal result. It seems there is a genetic mutation called MTHFR, if a person has one of them, it makes it difficult to process vitamin B. I have two of them. I have spent my life being deficient in B2 all the while my blood was full of the stuff. Both of those conditions can cause migraines. The formal description of my condition is as follows: "Looking at your report, I can see that you're homozygous for the T allele of the C677T polymorphism, which means that you have two copies of the version of MTHFR that is less effective than the normal form. That means you have a very good chance of having elevated levels of homosysteine in your blood, or the levels may spike at various points (such as after eating a source of the homosysteine precursor) which could well be contributing to your migraines." For the last two years I have been taking a number of capsules, daily. So far, I have had nothing worse than a 4/10 migraine and I have every reason to suspect that this improvement will continue. Hope to the hopeless is a marvellous thing." P.S. He now makes his own gluten free bread: apparently 50 percent of people cannot tolerate certain preservatives.***

XII. CONCLUSION: HARVARD GAZETTE INTERVIEW 2020

"The lesson is to never forget: Harvard expert compares 1918 flu, COVID-19"
Mineo, Harvard Staff Writer May 19, 2020

This is part of our Coronavirus Update series in which Harvard specialists in epidemiology, infectious disease, economics, politics, and other disciplines offer insights into what the latest developments in the COVID-19 outbreak may bring. Olga Jonas, senior fellow at the Harvard Global Health Institute, is an expert in managing the risks of pandemics. During her 33-year stint as an economist at the World Bank, one of her responsibilities was to coordinate the bank's contribution to the global efforts in 2006–12 to reduce the avian and pandemic influenza threats. In 2013, Jonas authored "Pandemic Risk" for the annual flagship publication, the World Development Report. As The Gazette spoke with Jonas about what governments can learn from the coronavirus outbreak to be prepared for the next pandemic, the Johns Hopkins Coronavirus Resource Center, was showing that the virus has infected more than 2 million people and killed more than 150,000 worldwide.

GAZETTE: What are the differences between the 1918 flu pandemic and the 2019 coronavirus pandemic? What are the similarities?

JONAS: Fortunately, such pandemics don't happen very often, but the speed of the virus spread is a most concerning feature. One clear difference is that the world is now much more densely populated than in 1918. There were fewer than 2 billion people in 1918, and now there are 7.5 billion, and the population is much more mobile. In 1918, there was no air travel. People move around much more, and the spread of a virus is much faster than before, when people traveled by ship or horse, or didn't travel much at all. Another difference is that in 1918, between 50 and 100 million people died within two years.

GAZETTE: What lessons did experts learn from the 1918 flu pandemic?

JONAS: There have been many books and papers written about the 1918 flu pandemic, and one of the main themes is how quickly it was forgotten, how fast it disappeared from the political discourse. I guess the lesson is to never forget because

forgetting doesn't lead to positive public health outcomes. We have had some global public health emergencies since then, but they have been less prominent: HIV/AIDS since the 1980s, SARS in 2003, and the 2009 H1N1pandemic influenza. What's interesting is that all these events have caught authorities and the general public by surprise, but scientists who have been studying pandemics were not surprised. A lesson we should remember is that governments have the responsibility to prepare for a pandemic; they have the obligation to invest in public-health systems to protect their citizens from both the threat and the reality of the next pandemic.

GAZETTE: How would you evaluate the U.S. government's reaction to the coronavirus pandemic?

JONAS: The U.S. government didn't react either quickly or adequately back in January, when the first confirmed case of coronavirus was found. Governments have to act early in the outbreak because the contagion spreads exponentially; two infect four, four infect 16, and 16 infect 84, and so on. There were serious lapses at the beginning, like the lack of capacity for necessary testing. When testing began in the United States, it was already too late. In an outbreak, every day counts. The comparison between the U.S. and South Korea is very telling. The first confirmed case of COVID-19 was found in the United States the same day as in South Korea: Jan. 20. South Korea acted right away by banning mass gatherings, implementing extensive testing, contact tracing, isolating the infected, and quarantining those suspected of being infected. As a result, South Korea was able to contain the spread of the virus; there have been more than 10,000 cases and about 200 deaths. In the United States, the situation is worsening by the day. Today [April 17] there are close to 700,000 cases and nearly 35,000 deaths, and the numbers keep growing.

GAZETTE: What were the measures that could have limited the spread of the virus and were ignored by governments and official financing institutions like the World Bank?

JONAS: To reduce the risk of a pandemic, the main requirement is that the government has to be prepared to react as a soon as a new virus with pandemic potential appears. Governments need to have surveillance, diagnostic, and response systems already in place before an outbreak, and those systems need to be properly funded in a sustained way. That has not been the case in the United States or other

countries. These systems are actually treated as a low priority when public funds are allocated, which is ultimately tragic.

Less-developed countries lack core public-health capacities for animal and human health. These are the surveillance systems of virus outbreaks: laboratory systems that can identify pathogens, and a system of rapid-response capacities to implement public health measures to reduce the spread of a virus. They perform three critical functions: to detect, diagnose, and respond to disease outbreaks. *Veterinary public-health capacity is important because 75 percent of new infectious diseases originate in animals. To name just a few: influenza, MERS, SARS, COVID-19, and HIV/AIDS.

"Governments have the responsibility to prepare for a pandemic; they have the obligation to invest in public-health systems to protect their citizens from both the threat and the reality of the next pandemic."

Unfortunately, many governments, even in developed countries, have been reluctant to plan ahead because after the event, it doesn't seem urgent anymore. They don't see the need to invest in protecting their citizens from the effects of a pandemic. It's unfortunate and shortsighted. Experts speak out all the time underscoring the risks, but they're often sidelined. It's ironic because these core public-health capacities are also necessary to make the health care system function better. Hopefully, COVID-19 will push the world to increase and sustain investments in public-health systems; it will be the most productive investment on behalf of mankind.

GAZETTE: How do you characterize the White House's response to the coronavirus health crisis?

JONAS: What we know from the 1918 flu pandemic is that the cities or governments that took early action in imposing quarantines, closing down schools, and banning mass gatherings had lower death rates than the places that did less or did it later. We also know that authorities with a clear strategy to communicate with the general public about what is happening and what people should be doing are very important to prevent economic impacts and the spread of the outbreak. An accurate and effective communications strategy is needed because this will determine how people cooperate or not with the control measures and thus help

reduce the spread. Accurate communications also reduce substantial economic costs, especially the large part that is due to changed consumer behaviors even before any quarantines are imposed.

After this pandemic, people are going to be writing papers about inadequate leadership and confusing messages from the White House. Experts know that a lack of clarity during a public health emergency reduces trust, invites rumors, suspicions, and uncertainty, and will have a great negative impact on economic activity. It's likely that there was a communications strategy written in advance, but it does not seem to have been used.

GAZETTE: What lessons can governments learn from this pandemic?

JONAS: One lesson that I hope we all learn is that governments should invest in the core public health capacities that are required for pandemic preparedness and pandemic prevention efforts. As we now know, a pandemic is not just a health issue; it has serious economic impacts and the effects on society in general can be profoundly damaging. Prevention has much higher benefit-cost ratios than spending money on containment, mitigation, and other after-the-fact emergency responses.

NOTE:** ***In my early days of weekly acupuncture on Vashon Island, I was nervous (pre-Lomatium) about interacting with animals. I attended a one day training session with therapy horses in spite of these facts: Hendra virus occurs in horses; a beloved horse had coincidentally died the day before; I could still "feel" viral occupation in my body even though "chi" (life force) was returning. Hendra virus (HeV) infection is a rare emerging zoonosis (disease that can be transmitted to humans from animals) that causes severe and often fatal disease in both infected horses and humans.

XIII. BREAKING VIRAL NEWS 2023-2024

https://www.aol.com/news/dengue-fever-soaring-worldwide-know-115849844.html
"Some of the more common symptoms of dengue infections include high fever, nausea, vomiting, and severe muscle and joint pain—the latter of which is how the disease earned the nickname "breakbone fever…There is currently no antiviral treatment for dengue, though the symptoms can usually be managed with medicine."

https://www.aol.com/news/ancient-zombie-viruses-melting-permafrost-135956540.html Prof Koopmans added: "If you look at the history of epidemic outbreaks, one of the key drivers has been change in land use. Nipah virus was spread by fruit bats who were driven from their habitats by humans. Similarly, monkeypox has been linked to the spread of urbanisation in Africa."

https://www.aol.com/news/long-covid-flu-lead-long-233000317.html "Our conception of these illnesses as acute events that you deal with and then put behind you has changed," he said. "The acute phase is like the tip of an iceberg. People who get these infections may need attention beyond the acute phase. We need to ask if they have fully recovered, if they are able to go to the gym like before, if they have the same mental acuity…Currently there is no cure for these post-viral syndromes. That's because "we really don't understand how the viruses are triggering severe health problems and why they persist," Gupta said. "There's a lot of research going on. I think we will figure it out."

NOTE: ***The Epstein Barr Virus can be transmitted through the placenta from mother to child and remain latent. I have always lacked sustainable energy. Glandular fever (Epstein Barr Virus) meant no sports, no friends, daily naps, studying in bed. I reactivated it age 15 after a first kiss and during pregnancy age 35 when the immune system goes off line. This resulted in a high risk pregnancy, pre-term labor and delivery. It took 5 years to recover and I was mis-diagnosed as having chronic, postpartum depression. Two mis-carriages followed. Atypical polio was mis-diagnosed as mumps while at university age 20. It was reactivated as Bell's Palsy in 1985 age 28. In 2011, at age 53, I needed a polio booster in order to study in South Africa. This booster, travel and exposure to pathogens abroad, triggered ME/cfs. Most patients in Facebook support groups test positive for two or more pathogens.***

XIV. RECOMMENDED RESOURCES

BOOKS

1. Keough, C., & Editors of Prevention Magazine. (1983). Natural Relief for Arthritis. Rodale Press. AND https://www.bannerhealth.com/healthcareblog/teach-me/what-are-rooster-comb-injections?

2. Kluger, J., (2005). Splendid Solution: Jonas Salk and the Conquest of Polio. Putnam Adult.

3. Jones, L. (2010). No More Allergies, Asthma, or Sinus Infections. Freedom Press.

4. Petrison, L. (2013). Back from the Edge: How One Man's Discovery Brought Him from Desperately Sick with Chronic Fatigue Syndrome to the Top of Mt. Whitney in Six Months. Paradigm Change: https://paradigmchange.me/

5. Keown, D. (2014). The Spark in the Machine: How the Science of Acupuncture Explains the Mysteries of Western Medicine. Singing Dragon.

6. Keown, D. (2018). The Uncharted Body: A New Textbook of Medicine. Original Medicine Publications.

7. Hng, K. N. (2018). Doctor with M.E.: My Journey with Chronic Fatigue Syndrome. Amazon.

8. Lynch, B. (2018). Dirty Genes: A Breakthrough Program to Treat the Root Cause of Illness And Optimize Your Health. HarperOne.

9. Teitelbaum, J. (2018). Diabetes is Optional: *Hintonia Latiflora/Sucontral D the Natural Way to Control Type 2 Diabetes. To Your Health Books.

***https://www.nhc.com/learning-resources/hintonia-latiflora-herbal-blood-sugar-support#**

10. Shelton, T.V. (2019). Herbs and Roots: A History of Chinese Doctors in The American Medical Marketplace. Yale University Press.

11. Myhill, S., & Robinson, C. (2020). Ecological Medicine. Hammersmith.

12. Hyde, B. (2020). Understanding Myalgic Encephalomyelitis. Nightingale Press.

13. Prior, R. (2024). The Long Haul: How Long Covid Survivors Are Revolutionizing Health Care. Penguin Random House Canada.

14. Barlow Christensen, J., & Christensen, B. (2024). Be Your Own Shaman: A Field Guide to Utilize 94 of the World's Most Healing Plants. Skyhorse Publishing.

*** NOTE:** ***"If you have diabetes or gastrointestinal issues and are looking for an alternative to help manage your condition, try adding a clinically studied Hintonia latiflora to your daily regimen and see what this remarkable herb can do for you. Hintonia Latiflora "copalchi" is sold in many marketplaces in Mexico and Central Americas." It prevents diabetes that can also be triggered by polio: Frida Kahlo had polio at age 6 and diabetic amputation at age 47.***

"In Europe, Hintonia latiflora has been clinically studied for over 60 years in relation to type 2 diabetes and has shown some impressive results. Early clinical work with the herb found that it was equal to or better than insulin in mild to moderate cases of diabetes. Studies have shown Hintonia latiflora combined with key nutrients for blood sugar control can:

- ***Lower A1C levels by 10%***
- ***Improve fasting and postprandial blood sugar by 23% and 24%, respectively***
- ***Balance total cholesterol and reduce triglyceride levels***
- ***Prevent hypoglycemia— undesirable drops in blood sugar***
- ***Reduce medication use—39% of patients reduced medication and some didn't need it at all."***

"Sucontral® D is a clinically studied German formula that supports healthy blood sugar balance and insulin function. This combination includes exclusive Hintonia latiflora, a powerful botanical, plus vitamins B, C and E, and trace minerals chromium and zinc."

REPORTS, ESSAY, DOCUMENTARY, FILMS, RECOVERY INTERVIEWS

Breaking News provided by European ME Alliance on Sunday 7th April 2024 Shocking Indictment of European Research and Healthcare Policies for Myalgic Encephalomyelitis: "As we celebrate World Health Day 2024 ignorance, apathy and lack of research toward ME/CFS in Europe must not be allowed to continue." A global update in Spanish (2022): https://www.revistalatoga.es/revision-de-las-guias-estatales-sobre-la-actualizacion-diagnostico-y-tratamiento-del-sindrome-de-fatiga-cronica/ para Juan Palma Gutiérrez. Letrado especialista en EM/SFC, Afectado por la enfermedad durante 30 años. Miembro del Movimiento Asociacionista Internacional.

Hillenbrand, L. (2003). A Sudden Illness. The New Yorker. Retrieved from https://www.newyorker.com/magazine/2003/07/07/a-sudden-illness "At Johns Hopkins, after a lengthy exam and review of my records, Dr. Bartlett sat down with Borden and me. My internists, he said, were wrong. My disease was real. "You have chronic fatigue syndrome," he said. He explained that it was one of the most frustrating illnesses he had encountered in his practice; presented with severely incapacitated patients, he could do very little to help them. He suspected that it was viral in origin, although he believed that the Epstein-Barr virus was not involved; early lab tests had linked the virus to C.F.S., but subsequent research had demonstrated that some patients had had no exposure to the virus. He could offer no treatment. Eventually, he said, some patients recovered on their own. "Some don't?" ~ "Some don't." That night, for the first time since March, I didn't dream of being an athlete. I dreamed of being ill. In my dreams, I was never healthy again." *SeaBiscuit* and *Unbroken* author, ME/cfs patient.

Prior, R. (2016). Forgotten Plague. YouTube. [Documentary].
"Ryan Prior's life imploded October 22, 2006 when he was struck down by a disease that dozens of doctors were powerless to diagnose, let alone treat. Against great odds, he becomes a reporter and ventures to tell the story of his suffering and improbable recovery. He is shocked that millions globally remain sidelined by the same disease, many bedridden for decades." Read his 2024 book: *The Long Haul.*

Brea, J. (2017). Unrest. [Film]. "When Harvard Ph.D. student Jennifer Brea is struck down by a fever that leaves her bedridden, she sets out on a virtual journey to document her story as she fights a disease that medicine forgot." https://www.youtube.com/watch?v=JvK5s9BNLzA

Serkis, A. (Director). (2017). Breathe. [Film]. "After contracting polio at the age of 28, Robin Cavendish is confined to bed and given only months to live. But with the help of his wife Diana and her twin brothers, and the groundbreaking ideas of inventor Teddy Hall, Cavendish emerges from the hospital ward and devotes the rest of his life to helping fellow patients and the disabled."

Schwartzberg, L. (Director). (2019). Fantastic Fungi. [Film]. "Fantastic Fungi is a descriptive time-lapse journey about the magical, mysterious and medicinal world of fungi and their power to heal, sustain and contribute to the regeneration of life on

Earth that began 3.5 billion years ago." NOTE: ***Specific fungi health benefits begin @ 35 minutes including those used in penicillin and anti-virals. This is followed by a long history of fungi fighting plagues and pandemics. Fungi success as a cancer treatment starts in the TED TALK. P.S. Golden Teacher micro-dosing capsules can*** **help some people re-set disturbed sleep cycles and dream again (REM sleep).**

Living with Chronic Fatigue Syndrome ME/CFS A MISUNDERSTOOD ILLNESS| ARTE.tv Documentary https://www.youtube.com/watch?v=OnWFIc66MpA (2024)

Watch Raelan Agle, YouTube: 75 ME/CFS Recovery Interviews Summarized - The Vital TOP 5 Takeaways (2022) with one common denominator being: "Slowly and safely expanding the tolerance of a person's nervous system." This injury is confirmed by Dr. Byron Hyde:"The enteroviruses causing polio and M.E. injure the vascular system of the central nervous system (brain and spinal cord)." contact@raelanagle.com.

Watch Raelan Agle Shares Insights from 200+ Chronic Illness Recoveries (being interviewed herself in 2025): https://www.youtube.com/watch?v=9Kp_9BkJsAs
Dr. John Sarno's book was useful to some recovery interviewees: https://www.sarnoclinic.com/seven-key-lessons-from-healing-back-pain-by-dr-john-sarno/

ME-ICC Info Table of Contents - MASTER LIST: DO I HAVE ME?

A quick guide to useful links about ME:

https://drive.google.com/file/d/1OLvCfM3HAZ4Yn_UELRWLXV8c3BTmwgnR/view

XV. A JOURNEY OF A THOUSAND MILES BEGINS WITH A SINGLE STEP (Lao Tzu): HOPE, after 15+ years of Myalgic Encephalomyelitis (ME/cfs) also known as pathogen overloads in Traditional Chinese Medicine…

"I got an oxygen concentrator! It's a good solid brand and I have been using it the last two days and so far it seems terrific. Doing Lomatium. Going to do massage/ acupuncture and Chinese herbal once it is a bit more safe - there are two brothers who do it where our house in CT is that are supposed to be legendary, with incredible expertise. So I may try to go to them. The only thing I don't recognize is Xylitol? I will check it out. I am going to do peptide therapy supposed to be powerful for Lyme and ME. I may be able to get a prescription - otherwise it is expensive! But I have never felt better than I have in the last few days since I got sick. And I am so grateful to you because I have basically followed everything you told me about. The oxygen therapy is going stunningly well - I have never felt so myself since I was sick. Doing really well, sense of humor coming back big time, personality emerging more, libido, etc. So for my 50th I will just be happy to be getting better, writing, and trying to get published!" Thought of you today, because I was listening to Bob Marley, Stevie Wonder, and James Brown and started spontaneously DANCING! Like you talked about - you said "you will begin to dance!" You were right. Today is a happy day." SPA

NOTE: ***SPA was the first ME/cfs friend I "met" on Facebook in 2013. He shared information about this global illness before I realized in 2014 that I had the early stages myself. Ten years later in 2024 I continue to research, write, travel and prioritize my health in retirement. Being a "canary in a coal mine" is both a blessing and a curse because it forces one to "Know Thyself" (Socrates). Recovery from ME/cfs means that I am healthier in Mexican retirement than I was at birth, or as a child and young adult in Africa, or as an adult working and parenting in America. Pathogens like ubiquitous Epstein Barr Virus (95% of people have it whether latent or reactivated) can be transferred through the placenta from mother to child. My mother had the same mystery symptoms as I did for decades, until her death at age 67. When President Clinton was elected in 1993, his effective campaign slogan was: "It's the economy, stupid." In my case with EBV and Atypical polio, and/or others with long haul Covid, it should be: "It's the virus, stupid" ~ to perplexed western doctors, specialists, researchers, disability lawyers and judges. Removing it is the first step to healing.***

READER FEEDBACK

- ***Oh My god, what a piece of work this is. May I share it with one or two ME/Long Covid friends? Thank you so much for doing this, for all of us! (SPA, USA)***
- ***It is useful to anyone with chronic illness. (Colleen S., USA)***
- ***Thank you. And for me Lomatium is completely new. Great article!!! (JPS, Europe)***
- ***Wow! That's impressive! Dedicated time and energy to write this! (Debi BS., USA)***
- ***What a great achievement. (Mel R., USA)***
- ***WOW, just read it in one go: amazing information and resource. (Phil S., Europe)***
- ***You have written quite the opus. Completely researched. (Ken N., USA)***
- ***WOW! This is something! Thank you so much for sharing. (Julia P., USA)***
- ***I was able to open the Home Alone 2020 pdf and found it fascinating. (Joni S.,USA)***
- ***You've done such exciting work! (Jeanne R., USA-Mexico)***
- ***I would love to share this with my long haul (disability) clients. A few of them are nurses…(Noel A., USA-Mexico)***
- ***A friend's wife who got very ill from the COVID vaccine. Could this benefit her? (Christal B., USA-Mexico)***
- ***Thanks for the information: amazing what you are sharing. (Chandi K., Mexico)***
- ***Clear, concise, meticulously researched. (Nigel SJ., Australia)***
- ***Thanks for the manuscript. Interesting. I will see how I can use it. (Alfred A., Africa-Australia)***
- ***I'm sure your work will help a lot of people. (Casey C., Africa-USA)***
- ***Wow, I'm going to read it! (Tessa F., Africa-Hong Kong)***
- ***Would love a copy to email out to hundreds and hundreds here. (Sue S., Africa-New Zealand)***
- ***Awesome. Just read the content page. Right up my alley. (David P., Africa-New Zealand)***
- ***"Gobsmacked" doesn't begin to describe the effect of your email. (Alex M., Africa-USA-Israel)***
- ***Wow, what an amazing book - so thorough and informative and what a journey you have been/are on! Down to earth and clearly factual in giving a good explanation of what went on. Read it all from cover to cover as it's so beautifully detailed. (Janet A.,USA)***
- ***Thank you so much for sharing your book; ironically, you make talking about illness delightful!!! (Paige W., USA)***

LONG HAUL COVID AND VACCINE INJURY ADDENDUM

1. Washington, April 9, 2024: "Sen. Bernie Sanders (I-Vt.), Chair of the Senate Health, Education, Labor, and Pensions (HELP) Committee, today released a draft legislative proposal to address the Long COVID crisis that is negatively impacting the health of some 22 million Americans." There is compensation for those people who react negatively to certain vaccines: For claims associated with the COVID-19 vaccine or other COVID-19 related countermeasures, file your Request for Benefits with: Countermeasures Injury Compensation Program. https://www.hrsa.gov/vaccine-compensation/covered-vaccines

2. February 20, 2024: Watch Dr. Annette Bosworth's YouTube video: "The biggest crime in the history of medicine" and then read https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10810638/ followed by: "mRNA:Vaccine or Gene Therapy? The Safety Regulatory Issues" https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10342157/

3. March 24, 2024: Posted by: Dr. M. Raszek."Currently, we do not know if this phenomenon of build up of IgG4 antibodies targeting the spike protein in the mRNA vaccinated is a health risk or is either benign or even perhaps protective in nature." Turbo Cancers Help Guide: https://merogenomics.ca/blog/en/178/Turbo-cancers-help-guide?

4. May 8, 2024 https://news.sky.com/story/astrazeneca-starts-worldwide-withdrawal-of-covid-vaccine-13131585 (including lawsuit by UK father)

5. May 17, 2024: Watch YouTube's "Appalling Vaccine Injury" interview by Dr. John Campbell with Brianne Dressen, a vaccine trial patient filing the first US lawsuit against AstraZeneca: https://aboutblaw.com/bd0D Covid Vaccine Injury Global Study: www.react19.org/study Covid vaccine injury medical expense fund: www.react19.org/donate

6. June 3, 2024: https://www.yahoo.com/news/covid-vaccines-may-helped-fuel-051100916.html

7. June 8, 2024:https://loudobbs.com/news/breaking-9th-circuit-court-of-appeals-rules-mrna-covid-19-jab-is-not-a-vaccine-under-traditional-medical-definitions/

8. Michael Locke: From BodyBuilder to Blood Clots - My Covid-19 Vaccine Injury & The American Medical System https://www.youtube.com/watch?v=MWc1PFvrm4Q

9. https://livewello.com/health-reports/rituximab-therapy-genetic-insights-and-the-covid-19-connection with Related Supplements.

10. Nicotine - a defense to Covid, post-Covid issues, and Shedding https://www.youtube.com/watch?v=ZrxQD1BB-ME

11. ICELAND establishes a clinic for ME /CFS patients August 15, 2024 because: "The establishment of the Akureyri Clinic is a much needed project, as we have seen a significant increase in the number of people diagnosed with ME/CFS in recent years, especially following Covid-19"…https://island.is/en/o/sak/news/akureyri-clinic-formally-founded

12. PORTUGAL's 1st International Conference 2024: https://www.youtube.com/watch?v=Vw77JiEEg1c

13. January 16, 2025 https://www.news-medical.net/news/20250116/COVID-19-dramatically-raises-the-risk-of-developing-MECFS.aspx

14. January 26, 2025 https://www.aol.com/feeling-extra-tired-virus-could-093002879.html

15. February 13, 2025 https://slaynews.com/news/fda-admits-covid-mrna-vaccines-cause-cancer/

HOME ALONE 2020 manuscript is being updated regularly. It is free (2024). Please consult your physician. I am not a doctor:

https://about.me/sharleenharty

https://www.instagram.com/hartysharleen/

Bedridden Self Recording (2017): https://www.youtube.com/watch?v=-XRWsA3ZRAs

Recovery Interview by Raelan Agle (USA 2024) (click on cc for subtitles or view transcript): https://youtu.be/2KUbYUuubKg

Recovery Interview by Simon Pimenta (UK 2024): https://youtu.be/tmprl6jaFb0?si=5wH-uSvkgeco-FZO

For translation trial www.deepl.com

For audio trial https://apps.apple.com/us/app/voice-dream-reader/id972112040?mt=12

MASKED VAN

Vashon Island, Seattle USA 2020: ***Photo by Jim Diers***
Pandemic Van Art by Michelle Bates and Stefan Freelan